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FLEXIBILITY IN GRADUATE CAREERS : AN EXPLORATORY STUDY

THE WORK CAREERS OF A SAMPLE OF 1970 GRADUATES.

By Jenifer Mary Lewis, B.Sc.

A thesis submitted towards the degree of Doctor of Philosophy in the discipline of Psychology, Faculty of Social Sciences, Open University.

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Abstract.

This thesis describes a three stage research project that explored flexibility in the career development of British graduates. Particular attention was paid to people's subjective perceptions of their own flexibility.

First, the rationale for the study is described, i.e. that the area was under researched yet new technology has created an urgent need for people to become more flexible in their careers. Then the literature of occupational choice, career change and career development is reviewed and used to derive a typology of occupational change. The decision to use a mixture of research methods is defended.

Next Stages One and Two, the Contact Survey and the Interviews, are described. 148 1970 graduates in science, technology and engineering who had made voluntary occupational changes (a subsample from a national survey) were sent postal questionnaires, and 38 of these were subsequently interviewed in depth about their work histories. A model was derived from the interview data of how flexibility in career development depends on a career anchor, or a set of values that a person gradually discovers that they will not give up when changing jobs. An anchor is idiosyncratic to the individual and cannot necessarily be predicted by an outsider examining work histories. It depends on experience and increasing self awareness.

Stage Three involved testing some of the ideas arising from this model of a career anchor on a second sample of 1970 graduates. These respondents had recalled two of their earlier career decisions using computer programmes that elicited their values at those times. Comparisons between their earlier (pre-anchored) decisions and their later (anchored) decisions showed support for the career anchors model.

The findings and conclusions of the project are discussed in terms of five research questions:

(1) How much change did they think their careers had undergone?

(2) What form did any changes take?

(3) Were these changes perceived as unusual in any way?

(4) How far could people's views and experiences of flexibility be explained by existing psychological theories about careers?

(5) Any explanations of the ability to show flexibility in career development have implications for the careers counselling of adults; what would these implications be?

It is concluded that the career anchors model shows promise as a supplement to existing theories of careers, and may be useful to careers counsellors who deal with adults contemplating or undergoing career transitions.

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1. THE STUDY OF FLEXIBILITY IN CAREER DEVELOPMENT: WHY DOES IT MATTER?

1.1 Summary

This chapter makes the case that a systematic study of voluntary career changes would be of use to careers counsellors and educationalists, and suggests how each of the terms involved could be clarified.

1.2 Introduction to career change: the research questions.

The research project described in this thesis set out to investigate the importance of flexibility in the career development of highly educated British adults. Particular attention was paid to people's subjective perceptions of their own flexibility. Five research questions were specified:

(1) How much change did they think their careers had undergone?

(2) What form did any changes take?

(3) Were these changes perceived as unusual in any way?

(4) How far could people's views and experiences of flexibility be explained by existing psychological theories about careers?

(5) Any explanations of the ability to show flexibility in career development have implications for the careers counselling of adults; what would these implications be?

The aim was to come to a better understanding of the flexibility that is shown when people make occupational changes, and in this way to help careers advisers and counsellors to foster such occupational flexibility in their clients when required.

But first of all why should flexibility matter?

In the last decade it became fashionable to study people who had made dramatic changes in their careers. Journalists and researchers have written, often anecdotally, about 'radical' changers, 'dropouts' and the 'midlife crisis',(e.g. Kelleher, 1973; Sheppard, 1971; Sarason, 1977). Counselling experts have reported on various training courses designed to assist certain types of career change, (e.g. Hyman, 1975; Entine, 1972), and even recommended that occupational flexibility may be desirable in our modern fast changing technological society, (e.g. Hall, 1976). The changes that people were writing about had usually been made when the person was middle aged. The career changers and their families were reported to consider that their changes had been positive experiences, which went against the grain of the assumptions behind most academic theories about occupations. (This point will be considered in Chapter 2.)

It was soon appreciated by some careers counsellors and management specialists that such successful flexibility might not only be possible, but might even be beneficial. In times of technological change and economic fluctuation, the capacity to adapt to several different occupations during the working life might be an asset, to both the individual and society. For example, Hall (1976) cites as desirable a 'protean' career, in which the individual takes responsibility for the management of their continuing and essentially flexible career development.

Fostering such a 'protean' career would seem therefore to be a valid and challenging task for those involved in education and careers guidance (Watts, 1980). To carry out this task would require a closer understanding of the psychological processes and experiences involved when people show career adaptability and flexibility. But it is a long way from stories of American executives 'going back to nature' to research that might help people whose career options have been transformed by modern technology. To help them assess how realistic their choices and expectations are, there is a need to investigate various types of career change and the possible links between them. A more systematic study of flexibility is required. We know a certain amount about what changes are made overall, but we know very

little about how people manage these changes, and how they feel about them.

The central concern of the study was to be flexibility chosen as a guiding principle, rather than flexibility as revealed, post hoc, by adaptability under extreme pressure, such as redundancy. When flexibility is chosen, it results in voluntary career change. This usually describes people who claim that they left a line of work in which they were established and reasonably successful, in order to take up another distinctly different occupation. Adaptability would be used to refer to people who made similar successful changes between occupations, but who did so only because they were made redundant, and could not find similar work. In practice, this distinction probably represents two ends of a continuum of change. Both types of situation are important in the study of careers; they can perhaps be regarded as two threads of the same overall research problem that are complementary to each other. Adaptability and flexibility cannot always be totally separated, but the focus of this study was definitely voluntary flexibility. Various calls for research into such people have been made in the literature, e.g. Walsh (1979), Watts (1981). Little work has actually been published; however it can be argued that such a research population has never been assembled (see Chapter 5).

The problem of definitions, which has already become clear in the foregoing sentences, is among the most prominent reasons for the gap in our knowledge about flexibility. It is obvious that the terminology of the whole area is anything but precise. What is meant by voluntary? What is a career anyway? And what constitutes a change in career?

1.3 Career

The word career is a familiar one in everyday use. This should surely be a point in its favour if it is to be used in a study of people's behaviour: we can at least ask them about careers without having to translate the term from academic jargon. But will this be a useful question, or has the word too many meanings to be clearly interpreted? It will be virtually useless as a core concept if this is so.

A concept is (simply) a classification of items or events. For any concept to be useful in social science, first its meaning must be made reasonably clear, i.e. its crucial distinguishing features must be well defined. There should therefore be some consensus or agreement on which events are to be included as features of a career but not as features of such closely related concepts as 'an occupation', 'profession' or 'job'. It should be equally clear which aspects are definitely not included in a career. Secondly, this differentiation from other concepts should be in some way illuminating. It should lead to questions about the phenomena under study. These questions should be ones that can potentially be answered, and beyond this they should be questions that it would probably be worth answering in terms of contributing to our understanding of human behaviour.

The first question for discussion is therefore: what agreement is there between social scientists on the crucial distinguishing features of a career. To examine this it is necessary to look at how the term has been defined and used in the literature. There are two main strands, the psychological and the sociological uses of the term career.

1.3.1 Sociological use of career

The theoretical use of the term in occupational sociology originates with Hughes in 1937. He distinguished two aspects of career, the objective and the subjective. The objective career consists of "sequences of formal statuses occupied by particular individuals" while the subjective career is "the moving perspective in which the person sees his life as a whole and interprets the meaning of his various attributes, actions and the things which happen to him." This was a broad perspective which attempted the integration of the occupation and its effects on the individual with their total lifestyle. It is describing what we might call a life career, i.e. something that everyone has. This is a change from,as well as an expansion of, the common usage of the word in which people are said to 'make' or 'follow' their careers. Hughes talks elsewhere of career in a similar way:

> (The) joining of a man's life with events, large and small, are his unique career.

The events he discussed in this article were in fact widespread social and economic changes that could affect a person's occupation, so there seems to be an intention to narrow down the original notion of life career. He later gave a more manageable definition:

> The (subjective) career includes not only the processes and sequence of learning the techniques of the occupation but also the progressive perception of the whole system of possible places in it and the accompanying changes in conceptions of the work of one's self in relation to it.

This moves the concept of career firmly into the area of psychological change. Changes are postulated in (i) the individual's concept of the work, and (ii) those aspects of the self concept that relate to work.

Occupational sociologists have mainly used Hughes' dichotomy of objective and subjective careers in studies of specific occupations. They discuss subjective areas that are typical of particular objective careers, e.g. Hall (1948) on medical careers, Becker (1952) on school teachers and Sadowsky (1977) on dentists. Becker makes a further subcategory in the term objective career when describing vertical and horizontal modes of progression. A vertical career involves mobility through a hierarchy of ranked positions (presumably upwards), while a horizontal career involves movement among positions available at one level of such a hierarchy. Vertical career is seen as:

> the patterned series of adjustments made by the individual to the network of institutions, formal organisations, and informal relationships in which the occupation is performed. This series of adjustments is typically considered in terms of movement up or down between positions differentiated by their rank in some formal or informal hierarchy of prestige, influence and income.

The essence of this view seems to be that the individual's interactions with the occupational system, as he gradually becomes aware of it, are limited by his perceptions of his possible places in it in the future.

Sociologists have used this idea of people's plans and expectations about their perceived futures in their writings about life areas other than work and careers. This is of course more in the spirit of Hughes' earliest work. The concept of career has become linked with ideas about

timetables that people set themselves for their lives. Perhaps the best example of this is Roth's work on sanatorium inmates (1963). He describes the way in which these people sought to structure, and thereby make predictable, a sequence of possible future events (such as operations or recovery) that had little claim to be so rigorously anticipated. It is argued that this type of anticipatory planning is a basic human need, so that in the absence of clearly interpretible evidence about the future, people will construct expectations based on the flimsiest of tangible evidence. Goffman's 'Asylums' (1968) extends the concept of career in a similar way, to talk of a moral career:

> The regular sequence of changes that career entails in the person's self and in his framework of imagery for judging himself and others.

Although not written about work, this surely has the same psychological dimension as Hughes' "accompanying changes in conceptions of the work and of one's self in relation to it".

To sum up, the sociological concept of career, when constrained by being associated with work concerns, emphasizes the power of the occupational system over the individual, and the adjustments she/he must make to accommodate this. The person's perceptions of the situation are central to this approach. People cannot seek entry to occupations of which they are unaware, nor can they make progress through their careers without being changed by their experience of the occupational environment. If this is so, a person's perceptions must be taken into account on any research into flexibility.

1.3.2 Psychological Use of Career

In The Psychology of Careers (1957), Super, the pre-eminent writer in this field, traces the use of the term career to a study done by the sociologists Miller and Form in 1946 (published 1951, also known as the Ohio study). This studied the work done during a given time period by 276 men and women described as a representative sample of the Ohio workforce. The researchers' main interest was in stability. They found that their respondents could be classified into six categories, which they called career patterns. These were:

1. Early entrance into a stable job (one held for more than three years).

2. 'Normal' job progression to a stable job. ('Normal' was not defined.)

3. Return to a trial job (one held for less than three years) after obtaining stability through the conventional pattern.

4. At the beginning of the trial work period (mostly younger workers).

5. Return to a trial job after quick attainment of a stable job. (Quick as opposed to 'normal' in pattern 2.)

6. Consecutive trial jobs with no stable job attained as yet.

Miller and Form considered that career patterns were:

> the sequence of occupations in the life of an individual or of a group of individuals

which could then be examined to show

> the major work periods which constitute a career

This definition may be useful because it is empirical (and pragmatic), but they failed to define occupation, which they used synonymously with job. A similar classification of career patterns was used by Gusfield (1961). He added the term 'established career period' to apply to workers who had been in the same job or occupation for six years or more. In his sample of 195 midwestern urban male employees he found four categories of career pattern, which he named as follows:

1. Directed career: longterm commitment to the occupation

2. Undirected career: frequent change and impermanence

3. Unestablished career: no record of any stable period (again defined as more than three years)

4. Disestablished: had been stable at least once.

It is clear that in these studies career patterns refer to sequences of jobs, and that stability is considered a valuable characteristic if present in the career pattern to which a person is assigned. The actual work done is not a focus of the research. At about the same time, Wilensky (1961) was studying 678 employed men between the ages of 25 and 55, excluding those at both extremes of income distribution. He was interested in what he called the 'work career':

> a succession of related jobs, arranged in a hierarchy of prestige, through which persons move in an ordered (more or less predictable) sequence

This is like Hughes' vertical objective career. Wilensky concluded that his results suported his theory that an orderly work career is likely to be facilitated by large work organisations, because they will encourage the workforce to become stable and satisfied. He clearly did not see every worker as having a work career, only those whose work histories match his above definition would qualify. Increasing prestige has been introduced as a crucial distinguishing variable, thus incidentally coming closer to a layperson's usage of the term career. We might consider Wilensky as having studied only those career patterns that are based on a professional system of values. However, modern vocational psychology has apparently stuck to career as a blanket description for any pattern of occupational sequences, as used by Miller et al. and Gusfield.

The explanation for this may lie in the roots of vocational psychology itself. It grew from a branch of psychometrics which was designed to match people's aptitudes, interests and values to the specific skills needed in a particular job. This led to a tendency to think that only one occupation, or type of occupation, was particularly suitable for a given individual, hence 'vocational' guidance. This in turn developed into the study of how a person comes to develop their ideas about occupations and then selects which one to enter. The implications were that given enough information and counselling they could select that one occupation and make a career in it, thus combining rather neatly the layman's usage of career and Miller and Form's definition. Much literature on occupational choice was thus generated. Super's is perhaps the most popular theory, and the most familiar to British practitioners. The central idea is that :

> The occupation makes possible the playing of a role appropriate to

the self concept.

This will be further discussed in Chapter 2, but briefly, modern developmental theories e.g. Super (1976), look at the process of choice as it takes place over several years, whilst the more traditional differentialist theories e.g. Holland (1966), examine the fit between person and job using six personality types. Structurally based frameworks e.g. Blau (1956), maintain that individual choice is highly dependent on the labour market, via

(i) the hierarchy of job preferences acquired and

(ii) expectations of being able to achieve these preferences.

1.3.3 Definitions and Assumptions

In summary, vocational psychology has concentrated on how young people choose their first jobs. Career has often been used as a blanket term for work history, including potential work history. It has usually been assumed that stability and continuity within one occupation are desirable, and it has been implied that this is the norm. It is further frequently implied, from the context in which the term appears, that progress in some form is essential to a successful career.

Psychology and sociology have approached careers from their different perspectives, and therefore found rather different definitions:

> There exists therefore, a curious contrast between the two approaches - on the one hand, we have psychologists saying essentially that 'people make careers', and, on the other hand, sociologists claiming that 'careers make people'. (Van Maanen,1977)

But the contrast is not complete; Super's "implementation of the self concept" as the essence of occupational choice, and Hughes' "changes in the conceptions of the work and of one's self in relation to it" as part of the subjective career, are surely discussing similar phenomena.

Where does this leave career as a useful concept? Going back to the two original questions, which can be paraphrased as 'can it be precisely defined' and 'does it lead to interesting questions', what answers can be

given?

To say that a career is the sequence of occupations in the life of an individual is only a statement about a higher level concept that can be used to subsume job and occupation. Everyone who has ever worked has had a career in this sense, but to be more precise we should to call this a work career, to distinguish it from a life career. This would of course differ from Wilensky's usage. He is in fact writing about what Slocum (1966) would define as occupational career:

> An orderly sequence of development extending over a period of years and including progressively more responsible roles within an occupation.

This would seem to be nearer a layperson's usage, and a logical subcategory of the work career as defined above. An occupational career thus has the crucial distinguishing features of continuity and progressive responsibility, which would not violate the assumptions and implications of vocational psychology. The subjective element is buried in this definition, until one asks who is measuring the development and responsibility progression.

If everyone who has ever worked has a work career, but only some have an occupational career, this increase in precision can lead to some interesting research. We can begin to make the connection with the sociologist's subjective career. If an occupational career can provide an organising theme, as suggested by Sofer (1970) and Van Maanen (1977), then we can go further than collecting data on the facts of people's work careers - we can look at the interrelationships between the work career and the occupational career, which may be of crucial significance in a study of voluntary changes. As Van Maanen says:

> What is most significant about a person's career is however, the degree to which it serves as the principle around which the person organizes his or her life. And this depends not only upon the status, direction, tempo and length of the career, but upon the meaning the individual ascribes to the career as well.

What Van Maanen seems to be saying here is that if the work career is entirely coincident with the occupational career, it will play a major part in the total life career of the individual. When a layperson talks of

a career, they too refer to an occupational career, which can be 'made' or 'changed'. They appear to be aware that this is only one way of implementing the self concept, and not one that everyone will attempt, let alone one at which all will succeed.

The study of occupational careers (as previously defined) is both possible and potentially useful in psychology. This is because, if people do in fact organize their lives around such a career theme, this is one way of exercising the pervasive psychological tendency to impose order and structure on the world. How might they do this? (What about people who don't do this at all? How do they impose structure on their lives?). One form of life organisation that has been suggested involves the formulation of a lifeplan, something which could for example commit the whole family to moving around the country to follow the career maker. Is such a lifeplan common? Is it usually broken down into patterns of subgoals to be achieved in a set order?

Questions like these can only be investigated if we are clear what we mean by career, so that we can check that the people we study are using the term in the same sense. Adapting the definitions as proposed by Hughes, Wilensky and Slocum respectively (already given) will provide basic starting points for the analysis of voluntary career changes. The complete set of definitions will then be as follows:

LIFE CAREER: The joining of a person's life with events, large and small.

WORK CAREER: A sequence of jobs in the life of an individual.

OCCUPATIONAL CAREER: An orderly sequence of development extending over a period of years and including progressively more responsible roles within an occupation.

Obviously, such definitions cannot, by the nature of their subject matter, be watertight, but this is a normal constraint in applied social psychology.

1.4 Professional Career Moves

From the above clarification of ideas about types of career, it is noticeable that a voluntary change that occurs when flexibility is chosen in an occupational career seems likely to be far more clearcut than one made by a person who has only a work career. An occupational career is likely to be synonymous with a professional career. Professional career changers should therefore be considered of particular interest in the study of career flexibility. Their experiences might be complementary to studies of professionals made redundant (e.g. Hartley, 1980; Swinburne, 1981).

Academic attempts to differentiate professions from occupations have often come to the conclusion that there is no fixed rule capable of achieving this satisfactorily, so we should regard professions:

> simply as those occupations which have been fortunate enough in the politics of today's work world to gain and maintain possession of that honorific title (Becker, 1971)

Even the U.S. Census Bureau will not attempt the distinction; instead it lists 'scientific and professional' as one category. In such an occupation it is likely that 'typical' career paths exist, so that any deviation from such norms can be identified by both participants and researchers.

A professional occupation is of specific psychological interest in that it normally requires a considerable long term commitment in terms of choices made within the British educational system while a person is adolescent. Once a school subject is given up, not only is it difficult or impossible to study it to exam level within the system, but also there is a well documented psychological tendency to justify a decision to which one is committed (Festinger, 1957). For example, each decision taken throughout the years of study and training necessary to become a member of most professional occupations would be likely to produce an acccumulation of commitment to the chosen occupational area, and/or the specific occupation. Any eventual voluntary change is therefore in opposition to typical psychological tendencies, as well as to the conventional academic vocational theories, as previously mentioned.

For the present line of research into flexibility in occupational careers, scientists, engineers and technologists are particularly good examples of professionals who need to have specialised in their school subjects for many years before they enter the world of work. Unless they have studied maths and the physical sciences thoroughly enough to reach a high standard in school examinations, their chances of entering a suitable degree course are minimal. They may have been following a narrow school curriculum since the age of twelve, and yet not have started work until the age of twenty-two, (or later if a higher degree is obtained). Other graduate professionals start work equally late, but do not specialise as early.

The educational path necessary for the aspiring engineer, scientist or technologist demands a vocational commitment almost equivalent to that of the prospective medical student. It is therefore not likely to be followed by those who have absolutely no idea of their future work. Some values in favour of a specific professional future are likely to be present.

This is also an area where there is much concern over public policy on education. In the mid1960s the Robbins Report on higher education (1963) said essentially that school children should be strongly encouraged to study science subjects, because this would eventually produce more scientific, technological and engineering gradauates to the benefit of British industry. Entry qualifications were amended, polytechnic degrees were established and many more people took up the opportunity to enter higher education. Yet when the preliminary results from a survey by the Unit for Manpower Studies (Williamson, 1979) were reported in the Business Times, the conclusions were that:

> Industry in Britain is failing to attract its fair share of graduates and the problem gets worse when degree holders have had a few years to look around. (Times, 1980)

1.5 When is a Career Move a Change?

Next it is necessary to consider when a job move made by a professional in an occupational career can be categorised as a change. This really hinges on how well defined career paths in the professional occupations really are in this country. Clearly, most people would agree that an engineer who retrains and becomes a social worker has made a distinct occupational change. But consider the work career of a graduate civil engineer. He might work first of all for a Local Authority, mainly out on site. Later, he could become a lecturer in civil engineering at a Polytechnic. His whole working environment has changed considerably, and he has changed sectors from industry to education (although still a local authority employee). He is however within the same academic discipline, and is using skills acquired within its framework. If he had become a Maths teacher in a secondary school, this would have been a more dramatic change, but involving the same sectors (and employer). The academic discipline has changed, although of course his degree is still relevant - he would not have been accepted if it had been in French Literature. Perhaps we can accept that all these are changes. Nevertheless it is important to realise that in a sense almost any job move might be a change. The work done by a civil engineer for the Local Authority eight years after graduation is probably in itself very different from what he did on joining them.

Perhaps the simplest way to cope with this problem area is to return to the career definitions. We need to consider what constitutes an occupation, so we can decide if someone is still within it. This can be done by consulting works such as the extensive occupational classifications published by official bodies. These are used for coding censuses and social surveys. Even they cannot be completely accurate, as job titles vary and new ones are appearing frequently. Even though they may be effective for plotting overall tendencies in how people behave during their work and occupational careers, they leave room for considerable ambiguity at an individual level. Since it is the experience of the individual that is of interest here, so that counsellors and educators may be better informed, it is only sensible to check on occupational definitions by asking the people concerned if they think they

have made distinct occupational changes. After all, if, as Berger states "Career is a primary source of identity", then who better to ask than the changer. This would also suit Kelly's famous dictum "Why not ask the person - he may just tell you".

The research was therefore planned with the intention of treating people's accounts of their occupational experience as of primary importance in understanding occupational flexibility. The rationale for this approach is further discussed in Chapter 5, while Chapters 2-4 concentrate on using the occupational psychology literature to provide a framework for the research.

2. RELEVANT THEORIES OF OCCUPATIONAL CHOICE - A LITERATURE SEARCH.

2.1 Summary

Research question 4 in Chapter 1 asked how far occupational flexibility could be explained by existing psychological theories about careers. The majority of these theories deal with original occupational choice, i.e. choice before and during the entry to work period. But flexible occupational changes undertaken voluntarily, the focus of the research, are also instances of occupational choice. It was therefore assumed that some of the many existing occupational choice theories might be applicable to the process of occupational change, especially as several have been revised in an attempt to encompass change. A representative selection of such theories will therefore be considered from this viewpoint, before the empirical research on change is reviewed in Chapter 3.

Theories of occupational choice can be subdivided into differentialist, developmental and structuralist. The most popular of these in practice is Super's developmental theory, which has been gradually revised over the years. Its main tenets are stages of vocational development and the idea that throughout these people are implementing their occupational self concepts. Associated research has focussed on adolescence and attempts to define vocational maturity as a characteristic of people who achieve stable work careers.

2.2 Classification

The literature on occupational choice is voluminous, and comprehensive reviews can be found in Osipow (1973) and Super (in Watts et al., 1981). In general, theories about occupational choice tend to overlap each other in content; they are rarely mutually exclusive. Precise classification is therefore a matter of preference. An attempt has been made here to

classify theories under headings that partially correspond with those used in recent reviews. For example Super (1976) manages to cover the field under only two headings, structural and developmental:

> The former deal with the characteristics of people and of occupations and with the ways in which these variables determine occupational choice....they are structural because, although they describe development up to a certain age, they postulate its cessation [i.e. the cessation of development] with childhood or adolescence....the second type deals more with the development of the determinants of choice.

However, when the theories classified as structural in this way are closely examined it can be seen that some, notably that of Holland, do not in fact state that all vocational development ceases after adolescence. In addition, some theories which discuss the origins of choice determinants do not comment at all on the timescales of their propositions, but appear to be discussing only the earlier years of adulthood, e.g. Blaikie (1971). It is therefore proposed that here the heading 'differentialist' will be used to cover what are often called trait and factor or actuarial theories, which focus on personal traits such as aptitudes or interests, and their relation to abilities required by a job, plus theories that concentrate on personality needs, both conscious and unconscious, and their relationship to jobs. The heading developmental will be retained, being defined as referring to those theories that are based on lifespan developmental psychology. The third heading, structuralist, refers to a more sociologically oriented viewpoint that emphasises the environmental constraints affecting occupational choice.

2.2.1 A Note on sexist language

Throughout this chapter, and elsewhere when occupational choice theories are under discussion, the masculine pronoun is used. This reflects the language used in the literature. Women's careers have only recently become a subject for study, and they are usually studied separately. It is clearly <u>not</u> assumed by most theorists that women's occupational choices are necessarily governed by the same processes as those of men.

2.3 Differentialist Theories of Occupational Choice (Traditional Psychological Theories).

> The underlying aim of almost all of the research in occupational choice has been concerned with the proper match between persons and jobs. (Mitchell and Beach, 1976)

This is to be expected, since vocational psychology has its roots in the psychometrics of skills, interests and aptitudes. The vocational guidance counsellor worked on a talent matching basis, using his experience of people and the local labour market. As methods of measurement were constantly being improved and refined, the counsellor's experience became increasingly supplemented by pencil and paper tests. The specific skills and aptitudes required in particular jobs were listed, so that the individual could be advised which work would suit his unique strengths and weaknesses. In addition to this, interest inventories were often used, because there was plenty of evidence to suggest that occupations can be reliably classified on the basis of the interests that characterize the men employed in them. A person whose pattern of interest matched those typically shown by members of a particular occupation would be likely to be advised to consider entering that occupation.

There were no specific theoretical frameworks to predict occupational choice. It was simply assumed that a person would prefer a job in which his talents would be utilised and in which his interests would be similar to those of his colleagues. An underlying assumption was often present: that there was one ideal job for each individual, and that further improvements in talent matching techniques would eventually enable advisers to predict this accurately from psychological tests.

The most prominent theory derived from talent matching techniques is that of Holland (e.g.1966, 1973). From his work as a clinical psychologist and vocational guidance counsellor, he developed six categories which can be used to classify both people and occupations. People are predicted to be most attracted to and satisfied by occupational choices that are congruent with, (i.e. in the same category as) their personality types. The six personality types are derived mainly from factor analysis of interest

inventories, and each has its own optimal occupational environment, comprising a group of occupations:

1. Realistic - involves aggressive behaviour and physical activities requiring skill, strength and coordination. Examples: forestry, farming.

2. Investigative - involves cognitive rather than affective activities. Examples: biology, maths, oceanography.

3. Social - involves interpersonal rather than intellectual or physical activities. Examples: clinical psychology, foreign service, social work.

4. Conventional - involves structured, rule regulated activities and subordination of personal needs to an organization or person of power and status. Examples: accounting, finance.

5. Enterprising - involves verbal activities to influence others, to attain power and status. Examples: management, law.

6. Artistic - involves self expression, artistic creation, expression of emotions, and individualistic activities. Examples: art, music, education.

One of the strong points of this theory, as opposed to many trait and factor theories in psychology, is that it does not assume that people cannot develop their personalities. It could therefore be used to conceptualise two types of occupational change: first where an adult has originally chosen a job that is not congruent with his personality, and secondly where an adult develops their personality until it is no longer congruent with his original occupational choice.

The limitations of Holland's theory seem to be that:

(a) It is not able to be particularly specific about actual job choice, as opposed to likely preference of occupational environment.

(b) It does not specifically consider the role of economic and social variables in occupational choice. This is an important flaw, because there

are far more occupations available of some types than others. Also, we do not know the frequency of occurrence of the six postulated personality types in the whole population. Parsons and Wigtil (1974) studied occupational mobility and concluded that:

> The major proportion of all the jobs in the economy are classified by definition as Realistic, Enterprising and/or Conventional...The predictive characteristics of selection seems to be more a product of the number of jobs available within a personality type.

However, this study only presumed that an individual was of the personality type congruent with the classification of his first job. The subjects did not actually fill in Holland's inventories.

(c) It does not consider the development of interests and preferences, nor the possible relationships between aptitudes and preferences. For example, artistic people are seen as needing artistic jobs, and they will not be happy or successful in jobs that are basically enterprising, whatever material and social rewards are offered. There is no consideration of people who have a strong preference for jobs at which they are inefficient, or those who dislike performing certain tasks at which they are extremely capable.

Other differentialist theories, such as Roe (1956), stress the matching of job with personality, with particular reference to the psychological needs of different personalities. In her research, Roe became convinced that the quality of a person's very early relationships affects interest development, and therefore eventual choice of occupation. This psychodynamic theory concentrates on:

> The individual experiences through which involuntary attention becomes channelled in particular directions.

Hypotheses about the relationship between early home climate and occupational choice have not been supported by research so far (e.g. Roe and Siegelman 1964, Clopton 1972). Supporters of the theory argue that subjects' difficulties in recall may account for this, rather than any defects in the theory. However, Clopton's study of occupational change (see Chapter 3, Study 5) found no significant differences between his two groups of changers and non changers as assessed by their answers to questions about the following aspects of their childhood: death of member

of immediate family, divorce, separation, being an eldest or only child, number of siblings, closeness of relationship with parent, number of schools attended and number of homes lived in. These should have presented no recall problems.

Despite the psychodynamic theorists, of which Roe is typical, there is a growing belief that conscious reasoning plays an influential part in occupational choices, however illogical and ill informed the individual may be at the time. For example, one of a series of speculations by Hoppock (1976) effectively summarises the commonest beliefs of the guidance profession today:

> The occupation we choose is the one we believe will best meet the needs that most concern us. Needs may be intellectually perceived, or they may be only vaguely felt as attractions which draw us in certain directions. In either case, they may influence choices.

2.4 Developmental Theories of Occupational Choice.

These are based on lifespan developmental psychology and they describe how occupational preferences develop during the whole process of choosing an occupation. The focus is on choice as a process, a series of stages and decisions taking place over a considerable time in the life of the individual.

The best known and most complete of the developmental theories by far is the continually evolving formulation of Super (e.g. 1953,1957,1963,1976,1978,1981). Super's theory is heavily derivative of the first developmental theory to be put forward, that of Ginzberg and his colleagues (1951). Ginzberg, Ginsburg, Axelrad and Herma described a developmental process taking place gradually over at least six to ten years, in which:

> An individual never reaches the ultimate decision at a single moment in time, but through a series of decisions over a period of many years; the cumulative impact is the determining factor. (Ginzberg et al., 1951)

The whole idea of a developmental psychology applicable to the early adult

years came from Buhler's influential 1934 work on lifespan psychology (described in Buhler & Massarik, 1968), in which she derived various developmental lifestages from detailed analysis of hundreds of life histories.

Ginzberg considered there were three stages through which each individual had to evolve towards occupational choice: fantasy, tentative and realistic. The fantasy stage refers to the child (before about eleven years old) who believes he can be whatever he wants to be. He cannot assess his own capabilities or the realities of his economic and social environment. In the tentative period (11-17 years approximately) some self assessment starts to occur. Interests, capacities and values are considered but external realistic constraints are ignored. In the realistic period (17-early 20s) he works out a compromise between what he wants and what he thinks is available, and a choice is made. This realistic period has three subphases, two of which involve compromise:

(1) Exploration:(17-18 approximately) where interests and values are followed up, for example finding out what a particular job involves.

(2) Crystallization: (19-20 years on average), acceptance of the chosen area, with the realisation that choice has been made.

(3) Specification:(early 20s) specialisation and planning towards a first job in this area.

Studies of US adolescents (e.g. Davis, Hagan and Strouf, 1962; Hollander, 1967) have provided support for the existence of these stages.

Although Ginzberg et al originally considered that people, as they grow older, become much more able to use their experiences of the world to review their self images, once an individual had started work the irreversibility of the choice process was assumed. In 1972, a restatement of the theory appeared without this assumption, so that the rather static idea of compromise became redescribed as

> "optimization - a dynamic search to find the best occupational fit between changing desires and ...changing circumstances (so that) the choice process is co-extensive with working life".

This major theoretical revision arose from research carried out by Ginzberg and his colleagues. This includes Hiestand's work on mature postgraduates (see Chapter 3) and various studies of highly qualified men and educated women (Ginzberg at al., 1964,1966).

It was found that :

> Many people who had decided on a career early in life, and who had pursued it for a number of years...might....seek a new career.

The reformulation (1972) therefore includes the following reference to career change:

> If the satisfactions that he sought originally are not forthcoming, or if as a result of his working he becomes aware of new career possibilities that promise greater satisfactions, it is likely that he will endeavour to make a new choice. The probability of his venturing the attempt and succeeding in carrying it out will be affected by two related factors,(a) the degrees of freedom that he has as a result of changing family circumstances..and (b) the pressures or options arising out of his job situation that force him to look for new employment.

Thus Ginzberg's revised developmental theory can be of relevance in the study of career changes if its proposed substages of the realistic period are considered a valid description of the processes involved.

To generate testable hypotheses, a descriptive theory needs plenty of specific detail, and it is the lack of this for which Super (1953) criticized Ginzberg et al. He too used Buhler's work, but took this still further by developing a lifestage theory of vocational development. Originally this denied any importance to the possibility of career change, but more recently it has been enlarged to allow that a person might reevaluate their concerns and therefore re-embark on the process of choice. The central idea is that:

> The occupation makes possible the playing of a role appropriate to the self concept.

2.4.1 Applying Super's theory to Occupational Change.

Super used Buhler's names for the stages and described what each might mean in terms of an individual's occupational concerns. These ideas came from the lifespan developmental psychologists (e.g. Havighurst 1953) who consider that particular developmental tasks are associated with each lifestage, so that the individual continues to evolve throughout the lifespan.

Super's stages of vocational development are as follows; all ages are approximate and each stage and its associated tasks is described in greater detail in Super's own writings.

GROWTH (up to 14 years). The self concept develops through identification with key figures in family and school. Needs and fantasy are dominant early in this stage. Interests and capacities become more important with increased social participation and reality testing.

EXPLORATION (15-24). Self examination, role tryout and occupational exploration take place in school, leisure activities and part-time work.

ESTABLISHMENT (25-44). Having found an appropriate field, effort is put forth to make a permanent place in it.

MAINTENANCE (45-64). Having made a place in the world of work, the concern is now to hold it.

DECLINE (65 on). Work activity changes and in due course ceases.

It is in certain substages of the five main stages that the theory's relevance to occupational change can be found. The three most relevant substages have been revised and refined to give the following:

TENTATIVE (15-17). Leading to crystallisation of choice.

TRANSITION (18-21). Involving specification of choice.

TRIAL (22-24). Involving implementation of choice.

All these are substages of Exploration, reminiscent of Ginzberg's early work. A more recent description of the first Establishment substage ,Super (1977) mentions the possibility of some change after choice:

> TRIAL AND STABILIZATION (25-30). The field of work presumed to be suitable may prove unsatisfactory, resulting in one or two changes before the life work is found or it becomes clear that the life work will be a succession of unrelated jobs.

The term "life work" is typical here. The assumption that there is an occupation for everyone, i.e. the one life-one career imperative (Sarason 1977) remains apparent in Super's theory, as in differentialist work. Sarason describes this imperative as:

> A cultural given, the force of which is no less consequential for its unreflective acceptance...what is the <u>one</u> thing you want to <u>be</u>?

Nevertheless, Super's theory contains much detail about the tasks that might be associated with the various stages and substages of vocational development. The details build up a picture of its author's view which is that:

> The occupation makes possible the playing of a role appropriate to the self concept...occupational choice is a process of implementing the self-concept... (the individual) chooses an occupation which will allow him to function in a role consistent with his self-concept.

Super's theory allows an individual to make an unwise original choice because his idea of himself is either unrealistic or rather over harsh. Super and various colleagues have done much research into occupational choice, but this has concentrated mainly on adolescents. In general, results have supported the idea of stages and tasks.

The theory is now described by its author as a model of "emergent career decision making" that can be applied to any career related decision, and it may include "a maxicycle as when one faces a mid-career change of occupation". This would appear to admit that such a possibility is not as deviant as was originally thought. Murphy and Burck (1976) have reviewed the male mid-life crisis literature and suggested as a result that an extra stage should be introduced between Establishment and Maintenance. This would characteristically be experienced between 35 and

45 years, and could be called Renewal. If this idea is correct, flexibility might increase at this time.

2.4.2 Vocational Maturity: a major test of Super's theory.

The main aspects of the theory have been operationalised via the concept of vocational maturity, which has been defined as:

> Readiness to cope with the developmental tasks of one's life stage, to make socially required career decisions, and to cope appropriately with the tasks with which society confronts the developing youth and adult. (Super and Jordaan, 1973)

A large number of specific tasks are defined as appropriate to each stage, so a person who can cope with all of these that are necessary for his particular stage is considered vocationally mature. For example a teenager of 15 should be exploring possibilities while an ambitious 45 year old manager should be maintaining his rate of upward movement within his organizational hierarchy. If the 15 year old were still only fantasising about impossible careers (a task of the Growth stage), he would be regarded as vocationally immature. Vocational maturity is assumed to be positively associated with vocational success, when defined in a large number of ways to include more or less objective criteria. However, although work with school children has been quite successful, it has recently been acknowledged (Super and Kidd, 1979; Super and Knasel, 1981), that the concept of vocational maturity has not been so useful in describing and predicting adult career progress.

> To show that the concept of maturity is applicable to understanding readiness for career decision making in adults, it is necessary, although not sufficient, to show that the nature of this readiness changes over time. The evidence is thoroughly inconclusive. To use the term makes unnecessary assumptions.(Super and Knasel,1981)

By far the largest study done based on Super's work was the Career Pattern Study, (Super, Kowalski and Gotkin 1967), which investigated vocational maturity. The result of this longitudinal study when the cohort reached adulthood are still not fully published, although some further results and conclusions appear in Super and Jordaan, (1974). Their

respondents were studied at ages 15,18,21 and 25.

Since vocational maturity involves coping with the appropriate tasks at the appropriate time in the career, the researchers categorised the work histories of their respondents into six types of career coping behaviour. These were:

DRIFTING: Moving with the tide in a job, aimless and effortless in so far as career progress is concerned.

FLOUNDERING: Seeking to obtain a goal, movement without a clear vision of what the goal is or how to attain it.

STAGNATION: Drifting without movement: nothing in the situation and nothing in the individual provides momentum in the career.

TRIAL Trying something out to ascertain how well one can do it or how much one likes it...in an occupation to which one has as yet minimal commitment.

INSTRUMENTATION: Doing something that may in its own right be inappropriate but will facilitate the attainment of an appropriate objective.

STABILISING: Settling down in a seemingly suitable place, in what is often called a regular adult occupation because it is psychologically, socially or economically appropriate or acceptable.

The researchers judged Trial, Instrumentation and Stabilising to be positive actions, while the others were seen as negative. This whole approach implies that changing away from an established occupation would be vocationally immature behaviour. It makes the same assumptions as earlier researchers such as Miller and Form (see Chapter 1) did about stability and the one-life one-career imperative.

Amongst their results, the Career Pattern Study researchers found that:

> The majority of subjects were judged to be stabilising, operating in a positive way, at age 25; over half had reached this status directly by a majority of positive moves. Of those subjects whose modal

behaviour had been negative, about one half had none the less reached a positive status by age 25.

Approximately one third of the subjects engaged in behavior which was, during the bulk of their post-high school years, characterizable as floundering. About one sixth showed equal proportions of floundering and stabilising.

It can be seen that even those whose modal behaviour was judged by the researchers to be negative had positive outcomes from their coping behaviour. However, the Career Pattern Study went on to conclude, as previously mentioned, that their vocational maturity measures were not particularly effective at predicting adult career behaviour or progress. This was the result of their attempts to predict six criteria of adult (i.e. age 25) career behaviour and progress in 93 males. The researchers used nineteen vocational maturity measures based on Super's theory, and fifteen measures that they refered to as standard or conventional. Examples of the vocational maturity measures were crystallization of interests, specification of vocational preference and weighing of alternatives, while the standard measures included grades achieved, socioeconomic status and level of aspiration.

> The standard measures which are most widely used in the schools and in educational and vocational guidance are the best predictors of vocational development in young adulthood. (Super, Kowalski and Gotkin, 1967).

More detailed conclusions about the Career Pattern Study appeared in Jordaan and Super (1974):

> In predicting adult career behaviors, the conventional measures were superior with three types of criteria, inferior with three and equally good with two. A composite measure of career progress since leaving high school (was) predicted about equally well by both types of measures, but more economically by standard measures. All of the criteria are better predicted by a combination of the two types of measures than by either type alone.

The best predictors for adult vocational behaviour amongst the conventional measures were parental occupational level and participation

in school activities. Among the most successful vocational maturity measures were Occupational Information Supply and Demand, and Implementation of Preference through Extracurricular Activities (consistently negative). The negative result meant that people doing well on this measure were significantly less likely to have scored highly on career progress as adults, so that someone who had consistently implemented their preferred potential career through their extracurricular activities while at school was unlikely to have achieved good progress. The authors explained this unexpected result as having occurred:

> Perhaps because most adolescents are not ready to commit themselves to a specific occupational goal. Premature attempts at implementation may inhibit the kind of wide-ranging exploration which many adolescents appear to need.

They concluded that:

> It is possible to construct a tentative picture of the kind of high school student who is most likely to have achieved success, satisfaction, and a place for himself in the world of work by age 25, as judged both by what he says about himself and by how judges evaluate his work history. He is more likely to come from a middle than from a lower class home, gets good grades and is active in school activities, has hobbies and pastimes which he pursues out of school, has goals which are in keeping with his intellectual level, and knows something about the occupation which he thinks he might follow. In short, he uses resources to good effect, both his own and those provided by the school and community. He is active and involved: he not only engages his environment but actively explores it. (1967 Report)

At the end of the 1974 chapter, the conclusion is:

> Knowing what you want to do isn't good, but knowing how you are going to do it is good.

Super's comprehensive and detailed theory is at present more descriptive than predictive, but it has been very influential:

> His formulations have probably affected the work of (vocational guidance) practitioners more than those of anyone else.(Dunnette,

1976, Handbook of Organizational and Industrial Psychology).

2.5 The Structuralist Viewpoint

A current debate amongst occupational psychologists (Daws 1977,1981; Roberts, K. 1977,1981; Roberts, R.J., 1980) concerns the strength of the opposing influences exerted on an individual's choice of first job by, respectively, the occupational structure and individual occupational preferences. Blau et al (1956) were the best known proponents of the view that economic and social constraints are far greater influences on occupational choice for most people than the personal psychological variables so far discussed. According to Blau et al., individual choice is dependent on (i) a hierarchy of preferences and (ii) expectations about being able to realise such preferences. Neither of these factors need necessarily be expressly understood by the person involved, although research suggests that U.K. teenagers, even before the current recession, were well aware of the constraints on their choices (e.g. Liversidge 1974).

Theoretical models based on expectancy value theory (since these explicitly take account of values or preferences and the probability of achieving them) are compatible with structuralist views and permit some degree of prediction of occupational choice. They are based on the idea that:

> The strength of a tendency to act in a certain way depends on the strength of an expectancy that the act will be followed by a given consequence (or outcome) and on the value or attractiveness of that consequence (or outcome) to the actor. (Lawler,1973)

Expectancy value theory was first applied to the study of occupations by Vroom (1964). A similar principle operates in decision theories. Both types of theory predict that an individual will choose that alternative which for him has the maximum expected value or subjective expected utility. An occupational preference can be regarded as an attitude towards an occupation in such theories. For example, Blaikie (1971) lists amongst his theoretical propositions:

> When individuals perceive restrictions related to their possible employment in occupations which are seen to accord best with their

high priority occupational goals, they will choose an occupation which they perceive will be least likely to hinder the realization of their high priority occupational goals, they will minimize value deprivation.

In a recent review of studies applying this type of theory in its various formulations, to the prediction of occupational preference and choice, fourteen studies were listed, all of which supported the uses of this approach (Mitchell and Beach, 1976). The successful predictions made were usually for student subjects, for whom specific realistic alternative choices and preferences were fairly obvious. Usually these alternatives were all within one occupational area, appropriate to the degree subject taken (e.g. Herriot, 1979).

The implications of these predictions for career development and change are not obvious, because they focus on a restricted area, that of final choice when the range of alternatives is narrow. However, the idea of considering the social and economic constraints upon upon original choice does have some relevance. An examination of the importance of these constraints (both social and economic) on preferences was made by Collin (1983). Her study of men in mid-career change (see Chapter 3, Study 16) found that many respondents had felt very limited by the occupational structure when taking their first jobs, but by middle age, they had often begun making individual choices amongst alternatives, feeling that they were following their preferences.

2.6 Criticisms of Occupational Choice Theories in Relation to Occupational Change.

All three types of theory can be adapted to consider occupational change, although this is not their primary focus. The types of change they would predict vary. Overall, most differentialist theories only appear to describe part of the story of career choice. They are limited because they are really a subgroup of fixed trait theories, predicting as they do that adult personalities will remain fairly stable. In relation to occupational matters, this means that changes of career can only be conceptualised as

occurring when someone is ill-matched to their original choice, as job satisfaction will depend on the closeness of the match between person and job. Thus the adaptability of at least some adults, as represented by studies of occupational changers (e.g. Hiestand, 1971; Labuda, 1974) is underrated.

Developmental theories, which reflect Hoppock's (1976) view of the guidance profession's beliefs far better than differentialist theories, are now probably more popular in practice in the U.K. Perhaps the main problem with Super's well known work (and other developmentalist theories) is that the associated research, being in the psychometric tradition, fails to capture the richness of the understanding shown in its author's actual conceptualisations of the stages. On the other hand, such theories have their strength in their ability to link career concerns with other life concerns, such as parenting, so that we gain psychological insight into a complete person, rather than a package of work relevant abilities and preferences. Super's work describes how occupational preferences may arise, and how they may lead to the original choice of occupation, rather than specifically predicting what choice will be made. As a developmental theory, it suggests when decisions are most likely to be made.

Although theorists such as Super stress the development of realism in planning, both they and the differentialists have been criticised, mainly by sociologists, for their under emphasis on the economic and social variables affecting the eventual choice and attainment of the first job. The structuralist viewpoint considers these to be the most important influences, and therefore changes in the labour market will be the primary influence on occupational change, even when people regard it as voluntary.

All the types of theory discussed may be useful in the consideration of a person's occupational decisions. The developmentalists suggest <u>when</u> preferences are developing, while the differentialists, especially the psychodynamic theorists, suggest <u>how</u> they may develop. Developmentalists and structuralists agree that realism interacts increasingly with early preferences, despite their differences over both the mechanisms by which this process may occur and its overall importance. Expectancy value and decision theory approaches quantify the preference-choice relationship,

and can predict choice quite effectively once the field of possibilities has been reduced to reasonable proportions, as structuralists would argue is the case for the majority of people.

3. EMPIRICAL RESEARCH INTO OCCUPATIONAL CHANGE: A REVIEW.

3.1 Summary

Surveys by sociologists and economists (e.g. Miller and Form, 1951; Gusfield, 1961; Wilensky, 1961; all in Chapter 1) have provided some data on the extent of occupational change, usually referred to in this context as occupational mobility. However, systematic empirical psychological studies concentrating on career changers have been few and far between. Sixteen were identified and classified into five categories. The principal studies in each category will be described in some detail. After each description, the relevance of the study to occupational change and flexibility will be considered.

3.2 Classification of Empirical Studies of Occupational Change.

Studies were classified according to the theories on which they were based, or the nature of their sampling and methodology. The Early General studies examined the job changes of heterogenous samples of people. The Mature Students studies used college students aged at least 30 and the Professional studies focussed on those who had changed from 'upwardly mobile lifestyles'. The studies based on theories used either developmental or differentialist approaches, while one study stood alone because it examined the changes made as they were happening, and regarded change as a process.

3.2.1 Early General studies

In 1967, Roe and Baruch of the Center for Research in Careers at Harvard interviewed 30 men and women between the ages of 30 and 50 who had been recommended to them as having recently made, or preparing to make significant changes in their occupations (STUDY ONE). The kinds of

decision made varied from quite large shifts such as painter to policeman or computer programmer to English teacher, to shifts between relatively unskilled jobs such as stitcher to packer. The researchers divided their respondents' reasons for change into two categories: either chiefly factors beyond the control of the individual or chiefly personal factors, (see FIGURE 3A).

Their conclusions were:

> The most impressive thing... was how few of our subjects thought of themselves as considering alternatives and making decisions based on thoughtful examination of the situation... most primarily stressed the contingencies and external influences that had determined the course of their careers.

They described these findings as "most depressing". However, as the sample was so diverse, both in terms of the occupation left and in the amount of difference between it and the new job, it is not surprising that few conclusions were drawn.

Roe and Baruch's distinction between the personal factors and those outside the control of the individual (external) when attributing reasons for occupational change was further developed by Murray et al (STUDY TWO,1974) in the course of their work on life histories. They do not refer specifically to the Roe and Baruch paper, but similarly propose two global dimensions "which are at least conceptually independent" and which can describe any conditions or events that will lead to pressure to change job. They call these two the self and the environment. For each of these two dimensions, the strength of the pressure for change can vary independently and may be positive or negative. For any one individual at any given time the total of these two pressures can result in a disposition to change jobs. (Even so, if no opportunities to actually do this are perceived, he/she will not be able to actually perform the action of changing jobs.)

This model was developed with the intention of conceptualising any job change. It was used "to characterise individuals' work careers according to the inferred nature of the work motivations which prevailed over their

FIGURE 3A REASONS FOR OCCUPATIONAL CHANGE GIVEN BY RESPONDENTS IN STUDY ONE, AS CATEGORISED BY THE RESEARCHERS. (after Roe and Baruch, 1967)

A. Chiefly factors beyond control of individual:

Company moving or going out of business, administrative reorganization, technological change, etc.

Inability to meet supermarket competition

Physical disability

B. Chiefly personal factors

Dissatisfaction with specific aspects of job

Dissatisfaction with kind of work

Unmet personal needs

Accidental discovery of attractive alternative

work histories." FIGURE 3B shows how the predominant patterns inferred from 72 complete work histories which Murray et al collected by interview were represented by this model.

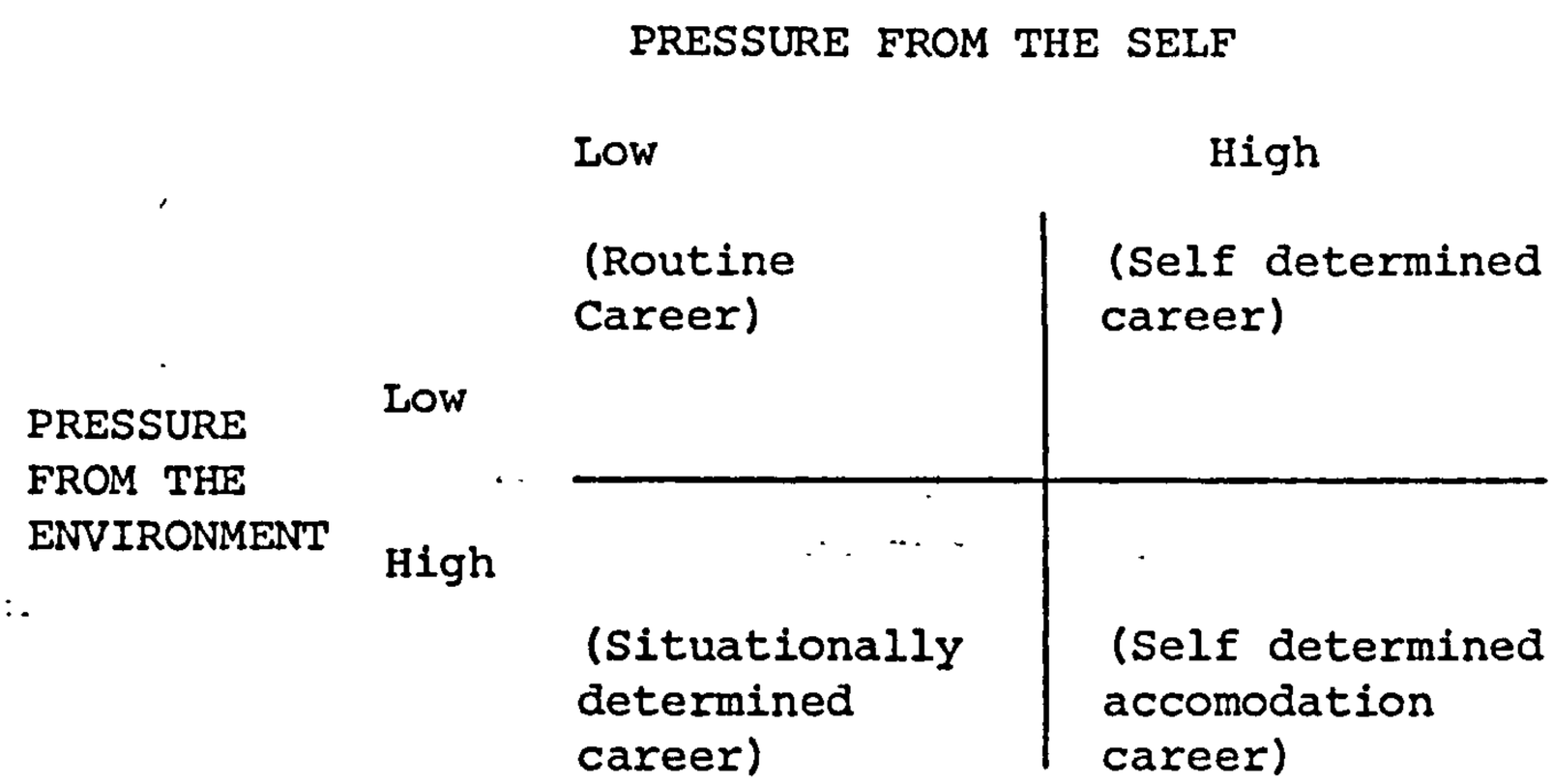
The numbers falling in each section are unfortunately not reported. The Routine Career, "undoubtedly the modal type in the modern United States today", "represents an absence of career change". It includes both steady work at one level and most normal promotions within any one field. It can be seen that career changers are likely to be found in any of the other three segments. Situationally Determined should cover some people who would appear under External factors in the model used in Study 1, while the rest of these would be classified as Self Directed Accommodation. The difference would be in their reactions to the environmentally induced change. People classified under Chiefly Personal factors on Study 1 would appear as Self Determined changers. Again, this study refers to an extremely heterogenous sample. It does not supply much data on individual cases, but can be seen as suggesting that the three categories discussed above could be applied to any changes.

3.2.2 Studies of Mature Students.

These college based studies used mature students to obtain more homogenous samples. The first study was probably the unpublished work of Schlossberg et al. in 1967 (STUDY 3). They looked at 332 male undergraduates over the age of 35, and concluded that these men were changing their occupations because of "emerging interests and needs, not solely out of fear and desperation". Their "primary motivators" were advancement, self improvement, changes in the job situation and family influences. The authors proposed that economic, social and personal factors had converged to produce these occupational changes. More specifically:

> Men who actually do engage in change do so when economic, social, and personal factors converge. a) The work content of previous jobs was not satisfying in that opportunity for felt productivity was absent. b) Available environmental alternatives or options have been recently perceived. c) Competency drive is strong in men in change. d) Men changing have experienced a 'critical incident' directly leading

FIGURE 3B. SCHEMATIC TYPOLOGY OF CAREER PATTERNS POSTULATED BY MURRAY, POWERS AND HAVIGHURST, 1979 (STUDY TWO)



to change. e) Men who change feel a discrepancy in how they have been implementing this through their work.

By this the authors seem to have meant that their respondents felt frustrated in their previous jobs because they did not have chances to express themselves and their abilities through their work. There was a concern for the quality of working life, and the possibility of self actualisation through work.

Schlossberg et al wrote that the changers were asking 'who am I?' and 'where am I going?' and that the difficulties and stress involved in such changes might be greatest for older men and for those of lower social class.

Since economic, social and personal factors are described as converging here, there would seem no point in attempting to divide them into the dichotomies used by the two previous models. Most of the sample would appear to be following Self Directed Accommodation careers, since their leading deterrents from entering college at an earlier age were financial concerns, lack of time, lack of guidance and military commitments.

In 1971, Hiestand published his book 'Changing Careers after Thirty Five' (STUDY 4) This describes research arising from the Conservation of Human Resources Project at Columbia, where Ginzberg's (1951) theory of occupational choice (see Chapter 2) was under study:

> Several investigations had convinced us that, critical as are the years of adolescence and young adulthood for occupational choice, it was essential to broaden the framework to make room for the changes that often take place in the mature years. (Ginzberg, 1971, in the foreword to Hiestand's book)

Hiestand studied 70 people who had enrolled in professional or graduate school after the age of 35 for full time study of at least one year, or for a part time schedule equivalent to this. The study period had to have been preceded by significant work experience or, for women, by time out of education. The oldest respondent was 58, and between them they were taking courses in a variety of subjects, of which education accounted for over one fifth of the total. Unlike Schlossberg's sample, most of them already

held one degree. They filled in a detailed questionnaire and replied to an open ended question about: "the factors which led you to enter or re-enter graduate or professional training at a much later age than usual."

The author's conclusions were that for the sample as a whole "their primary reasons for returning to school were overwhelmingly positive", but that there was no 'typical' older student. Very few people expressed general or particular dissatisfaction with their previous work situations, and there was little or no evidence that they were unstable or unconventional personalities. Half the sample could be classified as upgrading their present skills, either to enter or to advance in a profession. One quarter of the rest were making what Hiestand called a forty five degree shift, between related fields or within one broad field. The remainder were making a major occupational change. Those making major changes or 45 degree shifts tended to give such primary reasons as their intrinsic interest in a subject or field, or that a change was desirable or necessary, and often said that appropriate financial resources had become available. Using the previously mentioned Chiefly Personal-Chiefly External classification it would seem that these people were changing for Chiefly Personal reasons. The changes that were made fit Murray's Self Determined Career style, although the overall patterns of some of the cases described, especially the women, are more in accordance with the Self Directed Accommodation category.

Clopton (1972, STUDY 5) produced the first thesis on the subject. He studied career change using 20 'Shifters' and 20 'Persisters', carefully matched for age, sex, education, marital status, first career field and years spent in that field. All were aged between 30 and 55. The Shifters had spent at least 5 years in their first career, but were then pursuing advanced degrees as part of changing to a career defined as 'substantively different' according to US occupational classifications. Each Persister had to have experienced some desire to change profession. The investigation was carried out using in depth interviews covering the respondent's whole life, and four pencil and paper psychological tests.

The author is himself a mid career changer, and his hypotheses were derived chiefly from observations and experience. The results were that

Shifters showed significant differences from Persisters on availability of financial resources, experiences of personal counselling or psychotherapy, and changes in marital status. In other words, they had taken opportunities for change that arose. There were no significant differences between Shifters and controls in amount of support from wives, geographical mobility in childhood, family instability, mean standard scores on the Strong Vocational Interest Blank, self esteem, achievement, adaptability and impulsivity scores (California Psychological Inventory), locus of control scores (Rotter scale) or death anxiety scores (Templer Death Anxiety Scale).

The conclusions were that Shifters did not report less success in their first careers than Persisters, although they might possibly have been less adaptable to stress and conflict at work. Clopton suggests a 'highly tentative' taxonomy of career shifts:

A. Shifts undertaken as a direct consequence of some major event which impels the Shifter to reformulate the meaning of his life and his personal goals. Examples of such major events include sudden employment loss, Christian conversion, crucial insight through psychotherapy, and long term hospitalization.

B. Shifts occurring as a consequence of gradual disenchantment with the first career. Typically this is seen as not permitting full enough realization of potential.

C. Shifts occurring after the Shifter realises that although he still derives considerable satisfaction from his first career, there is another career which would be even more fulfilling; this is often rooted in previous avocational interests.

Category A shifts are reminiscent of Schlossberg's proposals (Study 3), and they create considerable problems for the Chiefly Personal- Chiefly External dichotomy. Although the environment can be blamed for accidents, illnesses and redundancy without stretching credibility too far, it does not seem appropriate to attribute psychotherapeutic insights or religious conversion to Chiefly External factors. All these types of shift A can however be encompassed by the Self Determined or Self Determined

Accommodation frameworks of Murray et al. Within this, shifts B and C might be potentially useful subclasses of Self Determined change, (see FIGURE 3C).

In another doctoral thesis, probably the most detailed analysis of the subject to date was carried out by Labuda (1974, STUDY 6). He attempted "to isolate the factors contributing to (occupational) change in relation to those involved in earlier (occupational) decision making". An exhaustive list of 47 possible factors influencing occupational change was developed. This was divided into Work Values, Situational Circumstances and Personal Resources. Each of these three categories contained one open ended item, e.g. 'Any other work value that influenced your decision'. An Occupational Decision Making Inventory (ODMI) (see Appendix 1) was thus constructed, consisting of 50 items, and this was administered to 30 male undergraduates, aged 35 or older, who had declared that they were making an occupational change, and who were classified as such on US occupational scales. They had to have pursued their previous careers for at least three years.

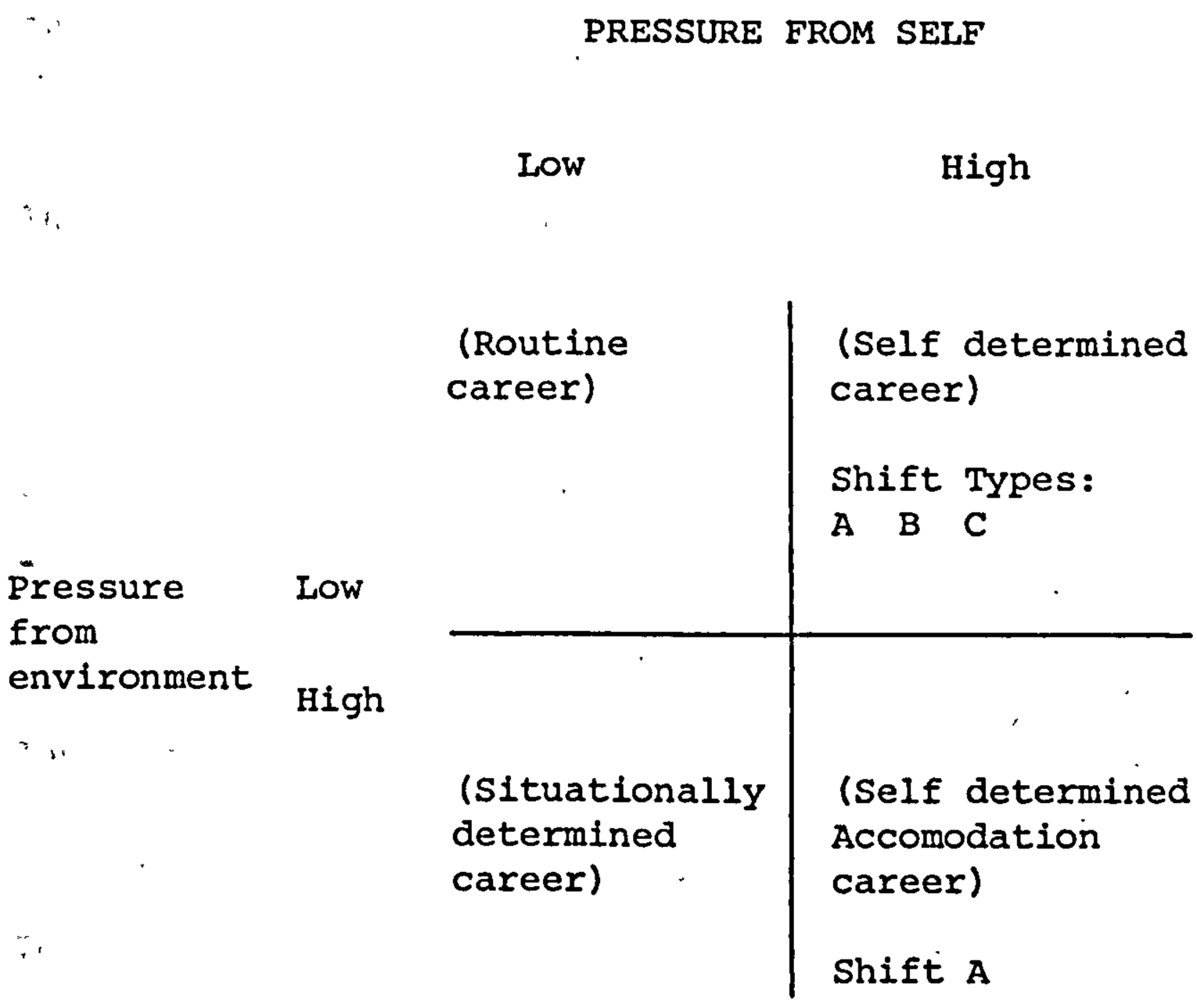
All the respondents completed the inventory twice, first for the current decision and then for their original choice of occupation. The author was available to discuss any queries. The task involved rating each item on a five point scale, with the constraint that the rating 'most important or influential at the time' could only be awarded to between five and eleven of the possible 50 items. These most important items for each decision time were then listed and ranked separately according to the 'relative criticalness' of each item, giving a final ranked list of important items for each occasion.

Hypotheses upheld were:

1. Significantly different hierarchies of Work Values were important at the two occupational decision making times.

2. Extrinsic Work Values were more important in the earlier decisions, security being the value responsible for this difference. (Extrinsic work values were defined as those derivatives of work which are highly prized but are not directly related to the work task itself or the work setting,

FIGURE 3C INTEGRATION OF MURRAY ET AL'S TYPOLOGY OF CAREER PATTERNS (STUDY TWO) AND CLOPTON'S TYPOLOGY OF TYPES OF CAREER SHIFT (STUDY FIVE)



e.g. security, salary.)

3. Intrinsic Work Values were more important in the later (current) decisions. Significant values here were named as social, intellectual, independence, altruism, artistic, authority and creative/inventive. (Intrinsic Work values were defined as those outcomes which are highly prized that result directly from the operation of the specific work task, e.g. responsibility, doing physical labour.)

4. Situational Circumstances were less influential in current decisions.

5. Situational compromises were less important in current decisions. The significant item here had been quick job entry.

6. Situational restraints (i.e. constraints) as a whole were more important in earlier decisions. The significant items involved were crisis, bad economy and lack of parental finance for education. Age however was a significantly more important constraint on later decisions.

7. Situational opportunities were more important in current decisions. The significant item here was technology creating new opportunities.

8. Personal Resources were more greatly developed in current decisions. The only item that had been significantly more important in earlier decisions was health/energy level. Personal resources that were more influential in current decisions were occupational information, education/training, work experience, economic freedom and competence image. (Competence image was defined as "image of myself as a highly competent and dependable person. Comfortable at competition. Others respect me." It was intended to be "reflective of self esteem".)

The findings as a whole were considered by Labuda to suggest that earlier the sample had been unable to cope with a competitive job market. They had been highly vulnerable to crises and felt an urgency to meet their security needs. Now they were coping more successfully, had eliminated crises and were using planning and exploration strategies. The overall picture is reminiscent of Schlossberg's sample, taking advantage

of opportunities denied them earlier in their lives. They seemed to be making Self Determined changes now, whereas their original choices were Situationally Determined or Routine. As Labuda's respondents were not asked about what their first careers were, but only how they were chosen, it would be difficult to classify their moves on Clopton's taxonomy of career shifts.

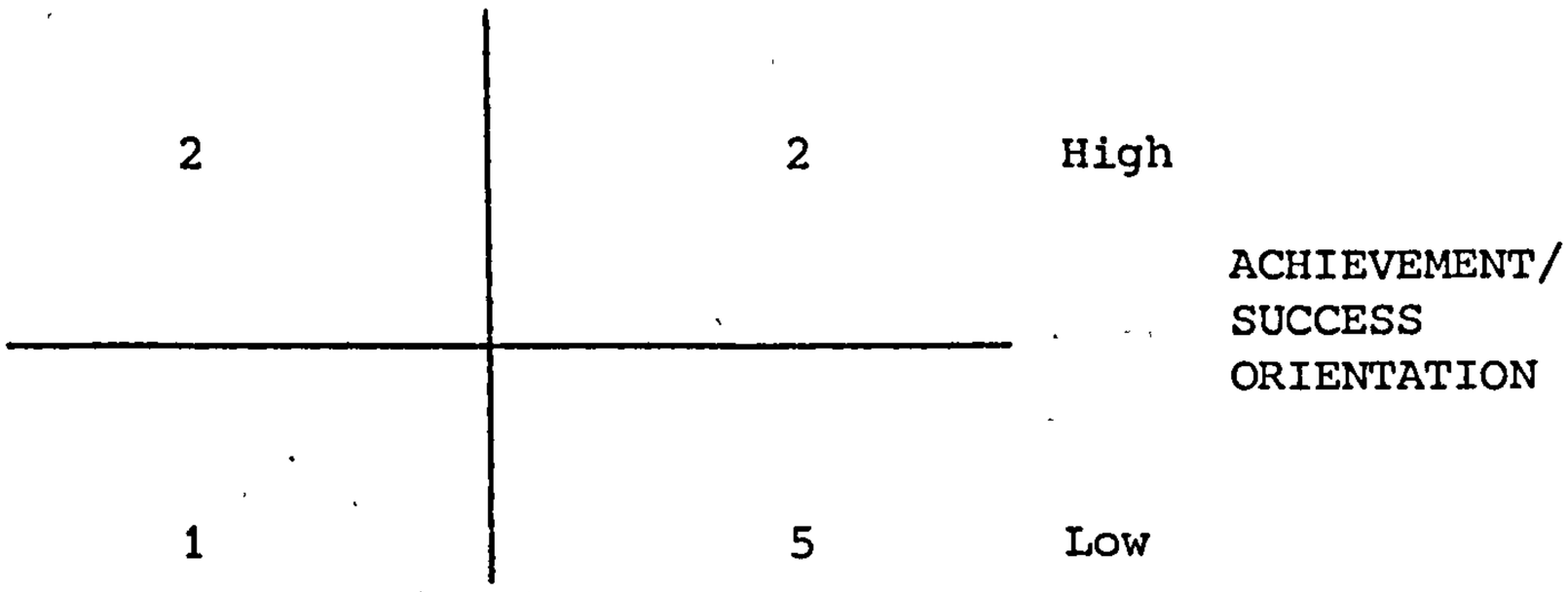
3.2.3 Other studies of professionals

Roberts (1975, STUDY 7) attempted to study a specific type of career shift. She did open ended interviews with 40 people who between the ages of 28 and 50 had dropped out of their financially secure and upwardly mobile careers into alternative lifestyles. All had at least one degree, and the range of occupations covered was wide. After dropping out, the respondents worked either at odd jobs or at developing their homes, often towards self sufficiency.

The conclusions were that this sample were frustrated at work, that they knew of alternative lifestyles, that a precipitating event may have led to dropping out and that they were healthier, happier and felt more secure after their changes. Some had even increased their incomes above their previously successful levels. This group can obviously be described as Self Determined changers, but it is impossible to say whether they were mostly Clopton's Shift A or Shift B types. This would depend on how long they had been frustrated at work, and whether precipitating events had occurred.

Thomas et al., (1976, STUDY 8) also set out to study what they called "corporate dropouts". These were 10 men aged 37-51 who had left successful middle management and professional positions to become self employed. After semi-structured interviews the researchers concluded that their terminology of the "corporate dropout" was misleading, because these men were <u>not</u> rejecting society's values and institutions. Instead they could be described by a typology of four categories based on the dimensions tough minded versus tenderminded and high achievement oriented versus low achievement oriented, (see FIGURE 3D).

FIGURE 3D TYPOLOGY AND DISTRIBUTION OF MID-LIFE CAREER CHANGES DERIVED IN STUDY 8 (after Thomas, Mela, Robbins and Harvey, 1976).



n = 10

Tender Minded = Giving evidence of concern about the feeling and welfare of other people

Tough Minded = Tender minded concerns were missing, or took second place to accomplishing desired goals.

Later the first author wrote an article, (Thomas, 1977) on the difficulties of deciding whether a particular change was to be attributed to personal or external factors. This arose because some men claimed they decided to leave, while their colleagues said they would soon have been moved to other less prestigious jobs within their organisations anyway because they were not progressing. Thomas therefore proposed that the sample could be divided into Changers and Pseudochangers, a distinction based on the changes in life structure that accompanied the possible career change. Changers also changed their values; often those concerned with success as defined by society gave way to more personal growth oriented goals. Pseudochangers usually started their own businesses in the fields in which they had been working. Their goals and lifestyles had changed little if at all. Indeed, it is doubtful whether some studies would have included such people as changers at all. One case, however, involved a man who had started his own business using his hobby (carpentry), which would compare with Clopton's Type C shift. His values and lifestyle were judged to be unchanged. The authors do admit that ten cases are hardly a strong basis for such a taxonomy, which has the additional problem of the researcher's needing to infer the probable degree of value change over the entire working life of an adult.

Robbins (1977, STUDY 9) one of Thomas' co-authors, went on to study 91 men of professional or managerial level, aged 33 to 54. All had some college background and were seen as individuals who had changed careers, also they rated themselves as having made a drastic change. Semi-structured interviews, questionnaires and the Strong Vocational Interest Inventory were used.

The hypotheses investigated were (1) that changes would be more frequent in the early forties, as a symptom of mid-life crises, and (2) that men would be more likely to change to new careers that were more congruent with their personality type, as defined by Holland (see Chapter 2). Neither of these hypotheses was supported. Findings were that changers wanted more meaningful work, better fit of values and work, and a chance for greater achievement. These were the most popular choices from a list of fourteen possible reasons for change. Many men in the sample had reduced their income, but their self-reported current levels of job

satisfaction were high, and there was no correlation between career change and changes in marital status. A distinction was made between those who changed voluntarily and those who reported they felt pressure to leave their previous jobs. The voluntary group took longer to consider and make their changes, often went back to get further education and were more likely to be contented with their new careers. Again, this sample appears to present a mixture of Self Determined and Self Determined Accommodation changes. The data collected was not sufficient to use Clopton's taxonomy of shifts.

Another thesis that may be relevant to occupational change was that of Sadowsky (1971, STUDY 10). He describes a qualitative exploration of 36 licensed dentists who, like himself, had left full time clinical practice, the core activity of their profession. The method used was in depth interviewing of both these subjects and 26 controls who were still working as clinicians. The conclusions place great importance on the idea of socialisation into a profession by internalisation of normative role. The 'leavers' are seen as becoming polarized away from their staying colleagues during the course of the long professional training, because of "status and value disparities". Thus they never accepted dental school norms, and did not proceed to shape typical professional careers, but instead suffered role conflicts which led to shifts to occupations such as teaching dentistry or health administration. If these leavers can be regarded as changers, then they were certainly leaving for Self Determined reasons. Since they were never really congruent with their occupations, Clopton's types do not apply.

In 1980 Neapolitan (STUDY 11) interviewed twenty five people (sixteen men, nine women) who were defined as having made radical and voluntary occupational changes in mid career, and twenty five controls matched for sex and first career. All were in high status occupations, and their ages ranged between thirty and fifty five. No details are given of how long the changers had been in their new occupations but they were all said to be highly satisfied. The author concluded that four categories of factor were important in occupational change:

1. Factors in the first occupation causing dissatisfaction.

2. Factors in the new occupation making it attractive.

3.Intervening obstacles that prevented change until mid career, for example financial difficulties or strong parental influence.

4. Personal factors, especially confidence in one's own ability to succeed.

Factors 1 and 2 were seen as necessary but not sufficient conditions for change. Together they were described as a lack of congruence between the rewards that a person values and those that are available from the first occupation. People who felt this lack of congruence changed occupation only if there were no intervening obstacles, or if they had the confidence that they could overcome the obstacles and succeed in the attractive new career. These changers fit Murray et al's model of the Self Determined career pattern. They also agree with the findings of Schlossberg and Labuda about early disadvantages. They probably include both Shift A and Shift B types as classified by Clopton.

3.2.4 Studies based on Choice Theories

None of these studies reported so far were firmly based on occupational choice theories, although some of Labuda's factors (Study 6) and one of Robbins' unsupported hypotheses (Study 9) were so derived. A few studies have attempted to use these theories. Bingham (1966, STUDY 12) and Lavery (1976, STUDY 13) tested groups of changers and controls on psychometric inventories derived directly from developmental theories of occupational choice. Their conclusions overall were that their assessment instruments had considerable limitations, and no further work on these lines appeared.

Vaitenas and Wiener (1977, STUDIES 14 and 15) report two thorough studies based on occupational choice theories. First they used 45 male voluntary participants in a career counselling programme, who were initiating occupational changes away from management or sales occupations. No situational factors could be identified as influencing these changers. Sixty-six controls employed in appropriately matched fields were also

used. The mean age of all respondents was 35. Three personality measures were completed, all of forced choice format. An overall significant difference was found between the two groups. The traits contributing most to this finding were Ascendancy, Dominance, Responsibility, Endurance and Order, which were all lower in changers. Holland's theory (see Chapter 2) would predict these as necessary for success in sales and management occupations. The authors suggested therefore that Holland's theory is supported, and that these changers had always been unsuited to their careers. Their peronalities were not congruent to the occupational environments typical of jobs in management or sales.

The second study investigated ideas about the importance of age in career change. Specifically, younger (under 35) changers were thought likely to show job incongruity, as in the first study, plus emotional problems (derived from Ginzberg and Super's theories, see Chapter 2), as well as a lack of differentiation and consistency in their dominant interests (Holland). Older changers (35 and over) were predicted to have been affected by midlife crises, as suggested by Lifespan Developmental theories, (e.g. Levinson, 1978). These are characterized by problems of generativity (an emerging concern for the care and development of others), fear of failure and life style doubts. Sixty-five changers and 85 controls, defined as in the first study,were assessed on all the variables predicted to be relevant, whatever their ages. There were 38 younger changers, 45 younger controls, 27 older changers and 40 older controls. Again, all subjects were male.

Findings were as follows:

Job congruity, assessed on a measure derived from the Strong Vocational Interest Blank, was found to be significantly lower in changers than controls, but there was no age effect.

Emotional problems were assessed both by the Gordon Personality Profile and a clinical projective test. Changers were lower in emotional stability than controls, and all younger subjects were less stable than the older groups. There was no interaction of career change and age, i.e. older changers were no more unstable than younger ones.

Differentiation and consistency of dominant interests were measured on Holland's scales. No main effects for differentiation were found, although younger changers were the least differentiated group. Inconsistency of interests was significantly associated with change at all ages.

Generativity was assessed by five of the interest scales thought to be indirectly relevant. Three of these showed controls of all ages as having significantly more generativity than changers, the opposite of what was predicted.

Fear of failure, measured by clinical assessment, was significantly higher in changers of all ages.

Lifestyle doubts, on a scale of the Edwards Personal Preference Schedule that relates to self reflection, showed no significant differences for any of the groups.

The conclusions were that, as in Robbins' work (Study 9), no evidence had been found to support the midlife crisis theories. Incongruity of job and personality, conflicting interest patterns and emotional problems were all associated with change; no assessment of the direction of causality can safely be made here because this sample had all sought counselling. The conflicting interests and emotional instability found may have been characteristic of their periods of change, rather than more longstanding traits. Alternatively, it might be suggested that only those changers who are emotionally unstable are likely to consult careers counsellors. There is no direct evidence of the sample's perceptions of their previous careers or their reasons for change, so it is not possible to further categorise their shifts, although it can be assumed that all were Self Determined.

In a study designed this way it is not possible to decide whether the variables that differed significantly in changers were associated with the stresses of making the change itself, which was still in progress at the time of the study, or whether they were more enduring, long standing characteristics of the subjects. In this case they could have originated well before the change was implemented. The Holmes-Rahe (1967) scale of

life stress and similar work emphasises that even welcomed changes are accompanied by some stress and anxiety. The changers in this study may have sought counselling during the change period because they needed to relieve temporary anxieties not felt so strongly by other changers. They would need to be restudied once settled in their new occupations to establish their characteristic levels of stress and anxiety.

3.2.5 A study of process

Collin (1984, STUDY 16) reports the only British study of occupational change. She interviewed thirty two men in their thirties, forties and fifties. All of them were in the process of changing direction in their careers, e.g. majors leaving the army, trainees at an Employment Rehabilitation Centre. Many of the men recalled being severely restricted in their original occupational choices. Later however they had become more capable of deciding what they wanted and how to achieve it. She says that instead of reacting to their situations they had become proactive; they had learned to construe their lives more positively, even when their material circumstances were unpromising. They were seen as having strengthened their occupational self concepts gradually through their experiences, until they could now implement them effectively, rather as described by Super's developmental theory of occupational choice (Chapter Two).

In this study, the men had not taken up their new occupations, so it was more a study of the change phase itself. It emphasises the flexibility and adaptability that people can show as adults and does not attempt to divide the men or their experiences into rigid categories. Collin found that the most useful way of conceptualising how her respondents managed their changes was to look at their orientation to the environment, which could differ along at least three important dimensions. The dimensions were self perception of the degree of openness of the environment, degree of activity on the environment, and personal sense of time horizon. All these affected the men's change processes.

As a study of process, this study does not fit easily with the other ideas reviewed here, although essentially similar to Labuda's findings in

that it highlights the influence of the restrictions on early choice.

3.3 Critique of the empirical studies

The studies reviewed were either atheoretical, or they failed on several points to support the theories from which they were derived. They provided a useful variety of perspectives but were lacking in comparability. They either did not recognise that there could be important distinctions between types, or concentrated on only one or two types of change. This could in itself explain much of the conflict in their findings. TABLE 3.1 summarises the studies and the samples they used.

Some studies were scrupulous about defining their populations in occupational terms, but no researcher succeeded in obtaining a random sample. Sadowsky did discuss how the process of change occurred in more depth than most other work, although his sample may also be criticised on the grounds that his changers never really became established in their profession. Wiener and Vaitenas failed to establish how typical their sample of changers were, in relation to changers who did not ask for counselling during their experiences.

The contribution of the early studies lies in their attempts to devise theoretical models, however simplistic, while the choice theory based studies did little more than confirm that neither trait theories nor lifestage developmental theories, at least when used in a simple straightforward manner, can describe or explain change.

The studies of mature students perhaps reflect a more humanistic stance towards change. They found their mature graduates were normal and stable personalities who were aiming for self improvement. Some were making the best of chances to move away from jobs that they no longer found satisfying; these were chances that had not been present at earlier times in their working lives. The use of control groups was able to demonstrate that not everyone who wanted to change occupations actually decided to do so. Hiestand emphasised that every one of his respondents was an individual, and that there was no typical changer. Clopton and Schlossberg highlighted the possible importance of specific occurrences acting as

TABLE 3.1 MAIN SAMPLE CHARACTERISTICS OF CHANGE STUDIES DISCUSSED IN CHAPTER 3

STUDY NUMBER AND RESEARCH	AGE OF RESPONDENTS	SEX			PREVIOUS OCCUPATION				TYPE OF CHANGE			STATUS AT TIME OF STUDY					WHETHER NON CHANGING CONTROLS WERE USED	N (not including controls, if used)
		Male	Female	Both	Professional	Specialised	Varied		Voluntary	Voluntary and Involuntary	No Distinction made	Undergraduate	Postgraduate	In Counselling	Specialised Training	Varied		
1. Roe and Baruch	30-50			o			o				o					o	No	30
2. Murray et al	45 and over			o			o				o					o	No	72
3. Schlcssberg et al	Over 35	o					o		o			o					No	322
4. Hiestand	Over 35			o	o				o				o				No	70
5. Clopton	30-54	o			o				o				o				Yes	20
6. Labuda	Over 35	o							o			o					No	30
7. Roberts	28-50			o	o				o							o	No	40
8. Thomas et al	37-51	o			o				o							o	No	10
9. Robbins	30-54	o			o				o							o	No	91
10 Sadowsky	Not given	o			o				o							o	Yes	36
11 Neapolitan	30-55			o	o				o							o	Yes	25
12 Bingham	Not given				o				o						o		Yes	84
13 Lavery	21-55	o					o			o						o	No	90
14 Vaitenas and Wiener	Means = 29 and 43	o				o			o					o			No	45
15 Wiener and Vaitenas	Mean = 35	o				o			o					o			Yes	65
16 Collin	30-55	o					o			o						o	No	32

catalysts for some occupational changes, but their work is more important for suggesting that there are several distinct types of change.

The most valuable studies for their depth and thoroughness were those of Labuda and Clopton. Collin's work on the nature of the change process would probably be included here except that it is not yet fully published. Clopton's attempts at a taxonomy of shifts makes a constructive effort in the direction of describing change more fully. The detail of Labuda's work emphasizes the large number of factors that may be influential in change, but does not examine whether all the respondents felt all the factors to apply to their own experiences.

Taken as a whole, this research suggested a large number of 'factors' to explain occupational change. These factors varied considerably in their level of analysis, from a general feeling of dissatisfaction to the very specifically defined death anxiety. They were often unconnected to one another even within the same study. Nevertheless, there was a distinct challenge to the one-life one-career imperative assumptions that most occupational choice theories embrace.

4. CONSTRUCTING A TYPOLOGY OF OCCUPATIONAL CHANGE.

4.1 Summary

In this chapter relevant theories and research findings are used to generate a provisional typology of occupational change as the basis for the subsequent research. This was the first step towards organizing disparate strands of theory into a form which could be used in the field research into occupational flexibility. The goal was to arrive at a typology of change that would advance the practical aims of the research project by increasing our understanding of the variety of changes that careers counsellors may encounter. To this end the provisional typology needed to be tested, in the sense of seeing whether it made sense to people who had undergone occupational changes, rather than in the sense of testing a questionnaire for its external validity.

There were five research strands to be integrated into a framework in order to generate a typology. The five research strands examined are: (1) follow-up surveys of U.K. graduates, (2) work on career development, (3) an exploratory in depth study of a small group of academic career changers, (4) the occupational choice literature, which has already been discussed in Chapter 2, and (5) empirical studies of occupational change, as described in Chapter 3.

The provisional typology of occupational change comprises four kinds of change and the factors that may differentiate between them are discussed. All the types of change proposed presuppose some flexibility in that changes of career are considered feasible in the situation. However, in one case the change is much less voluntary in nature and refers to adaptability rather than flexibility.

4.2 Graduate surveys

The first two research questions in chapter 1 were how much change did people think their careers had undergone, and what form did any changes take? To explore the question of how much change graduates were undergoing, evidence about British graduates and their occupational progress was reviewed. This evidence was from large scale surveys, which did not focus on change per se, but were useful in recording its possible occurrence.

4.2.1 Occupational Change: British Graduates of 1960.

The most comprehensive survey of graduate employment published was that of Kelsall (1966, published as Kelsall, Poole and Kuhn, Six Years After, 1970). This sample took every woman and every other man who graduated from every British university in 1960 (except for those studying vocational subjects, such as veterinary science). There were 12,986 respondents (response rate 78%).

Kelsall et al. asked mainly closed ended questions concentrating on education, type of job held and family circumstances. Findings relevant to career flexibility were:

* The majority of men were employed on broadly the same type of work throughout the period, and the greatest degree of stability was found in professional work (including teaching).

* The modal number of jobs held was two, and only 16% of graduates had held 4 or more posts.

* Social scientists and technologists tended to have held more jobs than average, but scientists held slightly fewer.

* Males were much more likely to have remained in the same employment sector as they started than to have moved to another sector.

* Only about 3/5 of the women were still in employment, and some of these were part time workers.

Further discussions of these results in Sociology of an Elite (Kelsall, Poole and Kuhn, 1972) concluded that:

> * (They) were able to demonstrate, above all, the profound effect of social class on the flow of graduates into particular fields of work.
>
> * Graduates from higher status homes were relatively more likely than others to have some clear conception of their future careers at the beginning of their university lives.
>
> * (There was) considerable support for the argument that graduates' aspirations are formed particularly by their families of origin.
>
> * The influence of social origins on employment opportunities became even more marked when graduates actually came to seek specific careers.
>
> * Graduates' assessment and experience of work owed more to their social origins than to their intellectual performance.

Various follow up studies have been made of this sample, concentrating on women and dual career families,(e.g. Woodward, Heath and Chisholm, 1978; Rapoport and Rapoport, 1971).

4.2.2 Occupational Change: British Graduates of 1970

A more recent survey of graduates was instigated by the Department of Employment's Unit for Manpower Studies. In October 1977 they obtained 6323 returned questionnaires from 1970 graduates (53% response rate from a population defined as 1 in 5 of all graduates from UK universities, plus all graduates from polytechnics, excepting overseas and vocational students).

The UMS survey was designed to provide some general comparisons with Kelsall's work. The greatest difference was thought by its compilers to be the growth in numbers obtaining university first degrees (147%), although it should also be noted that polytechnic degrees were not of course in existence in 1960 and that women graduates had become 30% of the total, from 25%. The questions covered similar topics, except that there was more emphasis on attitudes to work and more open ended questions were used.

Comparing the preliminary findings of the UMS survey (Williamson,1979) with Kelsall et al., points relevant to the study of flexibility were that by 1977:

* Public administration had taken over the expansionary role held ten years earlier by educational institutions. The main contribution to this increase was the high inflow of males, mainly engineers and scientists leaving industry.

* Commerce had consistently high inflows. These were mostly either male scientists and engineers leaving industry, or women leaving public administration or industry.

* Of the men from universities 58% of engineering graduates who changed from engineer became managers compared with 32% of science graduates who changed from scientist. Another 24% of the latter became teachers in their latest job. This move across to teaching is even more marked for women university science graduates who changed from scientist, with 48% becoming teachers and only 7% managers. Most of the engineering or science graduates who took first jobs as technologists or technicians but who changed occupations became managers (38%) or engineers (25%).

* Female mobility had increased, from 24% to 30%, but this was still 8% less than the male rate.

* 66% of all women were still in employment.

Both these surveys confirmed that a considerable amount of job changing and some occupational change was taking place amongst British graduates, especially the engineeers and scientists who had been selected as of particular interest.

4.3 Career development.

Another strand of research having potential relevance to occupational flexibility is that of career development; this focusses almost entirely on American male managers. For example, Hall (1976) and Schein (1978) have done several studies. Hall's most relevant conclusion was:

> Perhaps most importantly, the young person usually expects challenging work, work that is meaningful and ability-stretching. She (sic) wants to be able to test herself, to experience psychological success and a sense of competence. This need for competence, the need to have a impact on one's personal environment, is an important basic human need (White, 1959), and is especially important for young people. (Hall, 1976)

Schein, on the basis of follow up studies of management graduates, concluded that gradually, over a period of several years, people find a career anchor. He described a career anchor as:

> That concern or value that the person will not give up, if a choice has to be made. A growing area of stability within the person, without implying that the person ceases to change or grow. It emphasizes the interaction among abilities, motives and values.

In Britain, Pahl and Pahl (1972) looked at managers' home lives in Managers and their Wives, while Evans and Bartolome studied the European managerial lifestyle in Must Success Cost So Much? (1980). They looked at:

> How managers really invested themselves in their careers, their marriages, and their children, and how they balanced these different aspects of their lives.

These authors supported the idea of stages in the life cycle, and suggested that life phases (which they preferred to stages) were defined by the different central preoccupations that people have at each time. Between the ages of 20 and 34 approximately, the typical manager has to launch three careers, work, marriage and parenthood. By about age 35, there is ambivalence about the effect that his work and career are having on the quality of his marriage, and there may be a turning towards family life. In

the 40s and 50s a stage of generativity or maintenance is reached. Some men may feel defensive, and wish they had worked harder at their personal relationships.

Evans and Bartoleme considered that a sense of professional identity took some time to acquire. They agreed with Schein's idea of the career anchor, which they saw as equivalent to the professional self concept (comparable with Super's occupational self concept, see Chapter 2).

These studies of career development showed that people might move away from non-challenging work (Hall), or move to find anchors (Schein), or adjust their work expectations to fit in with their home lives (Evans and Bartoleme).

In 1981, Parsons and Hutt of the Institute for Manpower Studies looked at the mobility of young UK graduates. They surveyed 650 graduates who had recently changed employment. Their employers had been in industry or commerce. The sample contained a high proportion of scientists (36%) and engineers or technologists (29%). Three quarters of the graduates were leaving their first job after graduation, and many of them had been in those jobs several years. Two thirds of the respondents changed their sector of employment, and approximately half changed their occupations. Six sevenths were reported to be pleased with the results of their moves. Parsons and Hutt wrote:

> The results provided strong evidence that many graduates changed jobs because they felt their qualities were not being used, were dissatisfied with the general nature and pace of work, and saw limited opportunities for career development ahead of them.

4.4 A pilot study.

An exploratory study was carried out as the initial stage of the present research. It consisted of of taped interviews with ten graduates working in an academic environment. They had all volunteered by defining themselves as career changers. The interviews were long virtually unstructured discussions about the life histories of the respondents. Work

concerns were emphasised but other topics were not excluded. The interview worked back chronologically (how did you get into that?) until this became too complicated. The story was then resumed from school forwards. This procedure attempted to avoid the typical curriculum vitae or job appraisal review presentation, where a person may be in the habit of rearranging the story in a logical order to emphasize their occupational success and abilities. It was discussed extensively with the participants, who agreed that it was effective in helping them to be more insightful in recalling their past behaviour. Detailed notes on the tapes of these conversations were analysed and summarised.

Five themes emerged from this pilot study:

1. Family precedents. The influence of parents and other close relatives was strong when a first career was chosen. Family traditions and family businesses exerted a strong pull even over those who had no strong feelings towards the suggested occupation, or who disliked it. This was similar to the findings of Collin and Labuda (Chapter 3, studies 16 and 6).

2. Precursors. Before a career change occurred, there were usually clear indications that the person was not well satisfied by their job, e.g. they reported feeling very bored, or they had never been able to get on with their colleagues.

3. Catalysts. Often, a particular incident was remembered as having precipitated the eventual change, e.g. a disagreement with a customer leading to the resignation of a fashion shop assistant who became an accounts specialist and then an academic.

4. Decision styles. These varied considerably on several dimensions. These were:

a)From liking the challenge of making important decisions to using any excuse to avoid making any decision.

b) The influence of friends and spouses being sought either as equals,or for support/confirmation of a decision already made, or not consulted at all.

c) The degree of effort put into finding out about and evaluating the merits of several alternatives.

5. Luck/chance. Different attitudes were held about these as influences in the life history, possibly reflecting different attitudes to how much the individual controls their destiny. There was also a distinct impression that these people went through the education system with few plans, and that they had not tended to consider a very wide range of alternatives when choosing their occupations.

4.5 Occupational Choice Theories.

These were evaluated in Chapter 2. They fell into three categories: differentialist, developmentalist and structuralist. Structuralist theories minimise the possibilities for voluntary occupational changes because they emphasize the lack of choice enforced on most people by the labour market. However by implication at least, highly qualified people might be able to change occupations by choice if they found another occupation becoming more attractive to them than their original one. This need not necessarily mean that they were dissatisfied with this original occupation.

The differentialist would explain such a change as being the result of a mismatch between the person and the occupation, so that there would be strong pressures to change. Holland, the principal theorist, also allows that the adult personality may develop so that a person becomes mismatched with an occupation that was previously congruent for them.

Developmentalist theory originally predicted that occupational change will take place when people with weak occupational self concepts make unsuitable choices of occupation. Such people will not succeed in becoming Established, and so will cope with this by the Floundering, Trial or Instrumentation strategies. All these involve at least one change of occupation, until satisfaction is obtained. More recently, Super has written of "cycles of career decision making", such as when people re-evaluate their occupational goals after having been completely established in an occupation. Murphy and Burck's Renewal Stage pinpoints

this re-evaluation as most likely to occur between the ages of 35 and 45.

4.6 Occupational Change: the empirical evidence.

The review of occupational change research in Chapter 3 produced many disparate factors, all of which had been alleged by at least one author to contribute when people make occupational changes, (see TABLE 4.1). There were many ambiguously defined items, illustrating the problem of collecting and integrating the evidence about change into a reasonably coherent overall picture. Some studies simply listed self-stated reasons (accounts) for change, while others imposed their own classifications on the respondents' self stated reasons (accounts), or gave them lists of influences to be ranked. Some researchers discussed factors that correlated with change, and some put forward tentative hypotheses about change, while others moved on from their findings to postulate actual causes.

To further the investigation of flexibility, all of the proposed factors were evaluated with a view to reducing the ambiguity of the list. When examined more closely, many factors, although interesting in relation to subjective inside views of flexibility, were equally likely to be applicable to any voluntary change. However, attempting to pinpoint which of these factors was capable of discriminating one type of change from another led to the derivation of a typology of occupational change.

4.6.1 The Personal vs Situational dichotomy.

Factors (1), (2), (4), (5) and (6) on the list in table 4.1 were derived in the earlier General Studies (described in Chapter 3, Section 3.2.1.). They consist of a simple dichotomising of the pressures to move felt by the changer into situational/environmental or self/personal. This is intuitively appealing but disappointingly difficult to use, as has been argued in Chapter 3. For example, if a person is mismatched with their occupation, the unsuitable occupation is an environmental pressure, but equally, the lack of job satisfaction is a pressure felt from the self, and need not be integral to the job. Another person might find it deeply

TABLE 4.1 FACTORS CITED AS IMPORTANT DURING CHANGE, ACCORDING TO THE EMPIRICAL STUDIES OF CHANGE IN CHAPTER 3.

'CHANGE FACTORS'	RESEARCHER	Study No
1. Personal factors	(Roe et al)	1
2. Situational factors	"	
3. Desire for advancement potential	(Murray et al)	2
4. Positive pressure towards change from the environment	"	
5. Positive pressure towards change from the self	"	
6. Positive pressure from both self and environment towards change	"	
7. Desire for advancement	(Schlossberg)	3
8. Desire for Self Improvement	"	
9. Changes in job situation	"	
10. Family influences	"	
11. Lack of job satisfaction	"	
12. Awareness of alternatives	"	
13. Competency drive	"	
14. Intrinsic interest in a new field of work	(Hiestand)	4
15. Sufficient finance	" (+Clopton)	4,5
16. Major critical event: reformulation of goals	Clopton	5
17. Gradual disenchantment: feeling of unrealised potential	"	
18. More fulfilling alternative perceived		
19. Different hierarchy of work values, de-emphasising security, emphasising the occupation's potential for fulfilling personal needs, e.g. artistic, inventive/ creative, authority, social, intellectual, independence, altruism.	(Labuda)	6
20. Fewer situational constraints	"	
21. More opportunities perceived	"	

TABLE 4.1 (continued)

'CHANGE FACTORS'	RESEARCHER	Study No
22. Better personal resources: information, education, experience, financial circumstances and improved competence self image.	(Labuda)	6
23. Lack of job satisfaction	(Roberts)	7
24. Perceived alternatives	"	
25. Critical incidents	"	
26. Changes in values and lifestyle	(Thomas)	8
27. Desire for more meaningful work that fits values	(Robbins)	9
28. Desire for greater achievement	"	
29. Role conflict in original occupation	(Sadowsky)	10
30. Dissatisfaction with original occupation	(Neapolitan)	11
31. Attraction of new occupation	"	
32. Obstacles preventing change until present time e.g. finance.	"	
33. Belief in own ability to succeed	"	
34. Job incongruity	(Vaitenas et al)	14,15
35. Emotional instability	"	
36. Inconsistency of dominant interests	"	
37. Fear of failure	"	
38. Orientation to the environment	(Collin)	16

satisfying. If a more rewarding job that is seen to be attainable is regarded as an opportunity, then it must represent a situational pressure towards leaving the first job, but to respond to this the person must have a personal need pressuring for greater success/fulfilment/achievement etc.

Some changes are accompanied by 'critical incidents'. These cover a wide range: a person may seek therapy, but is less likely to be looking for hospitalisation or Christian conversion. Thus goal and value changes that affect occupational satisfaction can arise from both personal and situational pressures, or from a combination of the two.

Changes in job situation (9) is a particular type of situational factor, which, although most obviously associated with redundancy, can occur in any type of change. In fact, certain factors may be best regarded as not only likely but necessary for any such change. Unless a person (a) knows of an alternative occupation that he thinks he might pursue, and (b) has sufficient finances available to avoid any risk of himself or his dependents becoming destitute, he will not be likely to initiate an occupational change. Factors (12) awareness of alternatives, (15) sufficient finances, (18) more fulfilling alternative perceived, (21) more opportunities perceived (24) perceived alternatives and (31) attraction of new occupation are all in fact describing conditions that can occur with any type. They cannot be used to distinguish between them.

A desire for self improvement (8) and competency drive (13) are not further described in Schlossberg's study. They could well refer to changes away from incongruous jobs, changes towards better opportunities and changes associated with new goals and values. These factors are therefore not strictly necessary for any changes, but are equally likely to be associated with all of them. The same applies to an intrinsic interest in the new field (14), (since it does not preclude either liking or hating the previous occupation), also to family influences (10) and fewer situational constraints (20)(32). This is because family influences can range from a wife who stresses and encourages ambition to a family tragedy which leaves a man alone. The situational constraints lessening could be familial, financial or social/technological (i.e. the employment situation).

Personal factors (1), or positive pressure towards change from the self (5) are unlikely to occur without some situational factors being present to enable the person to follow the inclinations created by such pressure. Positive pressure from self and environment towards change (6) is likely to accompany any voluntary change. The only way the dichotomy of situational/environmental versus self/personal may be useful is in marking off involuntary changes from the rest, since this type by definition involves only situational factors (2), which is another way of saying it involves positive pressure towards change from the environment (4).

4.6.2 Job Incongruity.

One type of change is predicted to occur due to Job incongruity (34) according to Holland's theory, and all theories associate lack of job satisfaction (11,23,30) with a 'wrong' original choice of occupation. Wiener and Vaitenas also associated emotional instability (35), inconsistency of dominant interests (36) and fear of failure (37) with occupational change, because they found these traits to be significantly stronger in their changers, as compared with controls. However, their changers had asked for help during their changes, which is not typical of the other samples. From Holland's work, it would be logical to expect that inconsistency of dominant interests would accompany job incongruity, and in the long term it might even have contributed to the original incongruous choice. In some changes however, such inconsistency might simply be a temporary feature during the time of change. Sadowsky describes role conflict (29) as likely in this case. Labuda cites a different hierarchy of work values (19), de-emphasising security, as important in his sample. All of the participants had made unsatisfactory original choices. However, there is an obvious difference between someone who takes up an original occupation for many constraining reasons, is never particularly satisfied and eventually leaves when circumstances permit, and another person who works reasonably contentedly for years before he either gradually realises his goals and values have changed, or drastically alters them after a critical incident. Both may be seeking more meaningful work when they do make a change (27). The key difference

between the two types must lie in the amount of job satisfaction lacking, plus, even more, the length of time during which the person has been dissatisfied.

4.6.3 Personal resources and development

Collin (Study 16) found her respondents' orientation to their environment (38) to be the most fruitful way to conceptualise the processes of change that they were undergoing. Orientation consisted of at least three important dimensions. If people who fall in similar positions to each other on these dimensions make similar types of occupational change, it is plausible that these dimensions may be useful in characterising types of change, but this possibility is not discussed in Collin's articles. At present therefore these 'orientations' cannot be used to distinguish between types of change.

Labuda (Study 6) and Hiestand (Study 4) found that changers reported better personal resources when changing (22) than when making their original occupational choices, but as these studies had no control groups, they cannot be used to deny that time alone, rather than personal development, could have been responsible for the increases in the resources listed, which were occupational information, work experience, education/training and competence self image. The first three are self evidently likely to increase in <u>any</u> worker between adolescence and 35 years of age, while there is a certain amount of evidence that people's ideas of their own competence may do the same, e.g. Weiner and Vaitenas (Study 15) found that their subjects, both controls and changers, showed increased emotional stability with age. All the occupational choice theories and developmental psychology in general would predict this, at least until the possible 'mid-life crisis' age group.

Another type of change presupposes some considerable change in the person's goals and values. It may be argued that the qualities described by factors (3,7) desire for advancement, (28) desire for greater achievement and (33) belief in own ability to succeed might be shown by anyone who leaves a job which he does not have to leave in order to take one which he considers preferable. This may <u>not</u> always be the case, for example the

change where a person ceases to value career advancement and so takes up an occupation where these are not likely to be available (the anecdotal business executive who becomes an organic vegetable grower). Changes in values and lifestyle (26) are often associated with a major critical event (16,25) and reformulation of goals. This can produce gradual disenchantment: a feeling of unrealised potential (19), and a desire for more meaningful work (27). A distinctly different hierarchy of work values may be present, and these will not necessarily be those described in (19), which only involve revalueing security. Job satisfaction would be expected to have shown a recent decline.

4.7 The Provisional Typology of Change

Four types of occupational change can be distinguished. First, quite obviously, some changes will occur by "no choice". They are involuntary, such as when the person has no decision to make, e.g. redundancy or end of fixed term contract. It is clear from the change studies that some subjects did not change their occupations for any reasons that could even remotely be described as voluntary. They had lost their jobs and were unable to find similar ones, either due to the current employment situation at that time or to some alteration in their capacity to do the work (i.e. they had become physically disabled). A category is needed for these people:

1. INVOLUNTARY/NO CHOICE: A person may change occupations simply and only because his previous occupation has become unavailable to him. No inclination to change for any other reason is evident.

The second type proposed is where there is no lack of job satisfaction or change in values. There is simply an awareness of preferred opportunities. No one factor can be cited as essential; it is rather that there are no strong situational pressures to leave, or any definite job dissatisfaction or value change involved with this type. It can be defined as:

2. OPPORTUNITY: The person has become aware of a more desirable occupation that is perceived as attainable. There is no explicit lack of job satisfaction or any change in values and goals. The drive for achievement/advancement may be particularly strong.

All the strands of theory examined allow for this type of change. It may be more likely to be available to highly qualified people, e.g. Hiestand's study. Nevertheless, if this type of change is common, this would provide a strong argument against the one life-one career imperative, as discussed in Chapter 2, Section 2.4.1.

The third category represents mismatching, where the person decides they are unfitted to their job:

3. MISMATCH: The person has chosen the wrong job, and is moving away from it when circumstances are perceived that make this feasible. They will show job incongruity and a lack of job satisfaction, possibly associated with role conflict. The original choice will have been accompanied by circumstantial constraints and/or slightly different ordering of work values.

This is a fairly self explanatory category, again predictable from choice theories, and often found in the change studies and career development literature, e.g. Labuda, Sadowsky, Parsons and Hutt.

The final category represents changes resulting from personal development:

4. PERSONAL VALUE CHANGE: The person has changed their goals and values since they chose and settled into their first choice of occupation. There is a desire for work to fit in with the new values, and there may have been critical incidents that alerted the person to their changes in goals and values. Disenchantment, whether gradual or otherwise, will have occurred.

Type 4 represents the archetypical 'radical' changer. Developmentalist theories have now evolved to accommodate such a change, and some studies concentrated on it, e.g. Roberts, Neapolitan.

5. PROCEDURES & METHODOLOGY FOR THE STUDY OF FLEXIBILITY IN OCCUPATIONAL CHANGE.

5.1 Summary

The first section of the chapter deals with the research plan, the selection of the first sample and the Contact Survey (Stage 1). The second section describes the overall methodological approach taken during the project, and explains the high value placed on thorough qualitative studies. The case is made that qualitative methods can legitimately and usefully be combined with quantitative research.

5.2 The plan

Research on the five questions listed in Chapter 1 was organized in three stages. The five questions were

(1) How much change did they think their careers had undergone?

(2) What form did any changes take?

(3) Were these changes perceived as unusual in any way?

(4) How far could people's views and experiences of flexibility be explained by existing psychological theories about careers?

(5) Any explanations of the ability to show flexibility in career development have implications for the careers counselling of adults; what would these implications be?

At STAGE 1, the Contact Survey, it was necessary to contact graduates, preferably engineers and scientists, who had made occupational changes as defined in Chapter 1. They were to be asked about their changes, to test

the definitions of change, and the provisional typology derived in Chapter 4. (Testing in this context meant to establish whether the types of change made sense to people who had experienced occupational change.) This would provide preliminary answers to questions 1, 2 and 3, and establish whether these respondents would be willing to be studied in more depth.

At STAGE 2, the Case Studies, the sample's experiences of flexibility were to be be explored in more depth using qualitative techniques and related to existing theory. This would elaborate on the answers to the first three research questions, and begin to answer the last two.

STAGE 3 was to involve further testing of the ideas arising out of the first two stages, on another sample of graduates.

5.3 Stage 1, the Contact Survey..

Stage 1 was designed to provide a suitable sample of graduates who would be accessible for thorough investigation and willing to participate. Chapter 1 broadly discussed the type of sample that was thought suitable and decided that professionals, especially engineers, scientists and technologists would be suitable for the study of flexibility during occupational change, and noted that they are of vital importance in educational and industrial policy making. Definitions of the key terms were considered and certain essential criteria that an ideal sample should fulfil were selected:

1. People must have chosen to leave a line of work in which they were established and reasonably successful, in order to take up another distinctly different occupation.

2. People must have been in professional occupations, i.e. those which offer occupational careers, defined as an orderly sequence of development extending over a period of years and including progressively more responsible roles within an occupation.

3. Their changes in occupation must count as changes across categories within a recognised set of occupational classifications, i.e. one used in

research by professional bodies.

4. The person involved must agree that a change in occupation has occurred.

5.3.1 Obtaining a research sample for Stage 1.

In the real world, there are always constraints on achieving an ideal sample. In this case, the foremost constraints to be considered were the two that are most basic and most common: time and money. A national survey to find 'ideal' cases was out of the question, so secondary sources were investigated, to find a sample of U.K. engineering/science graduates who had made occupational changes.

The Unit for Manpower Studies (UMS), part of the Department of Employment, was contacted to see if collaboration would be possible. Their National Survey of Graduates, as described in Chapter 4, was likely to provide a suitable sample. It was also necessary for negotiations to take place with the Association of Graduate Careers Advisers (AGCAS), because they had facilitated the original data collection for the UMS. Both organisations were willing to co-operate in principle by providing a sample, but there were two problems. They both needed to be assured that the confidentiality of their respondents was protected, and UMS was experiencing severe problems with data analysis. There had been a shift of emphasis in the department away from studies of graduates and towards problems such as rising unemployment amongst teenagers as the recession began to bite. There were also problems of industrial relations amongst Civil Service computer staff, who went on strike for some time.

It was agreed that, to preserve the original respondents' confidentiality, a sample would be defined, then their names and addresses would be accessed by the UMS, who would send them the questionnaire prepared for this research and an explanatory letter about the project. Both the UMS and AGCAS had to approve of the contents of the questionnaire and accompanying letter. In this way the names and addresses of individuals were never released to the Open University unless and until the person concerned chose to reply to our enquiry.

A specification for a sample of career changers was then drawn up for the UMS to use as a filter of their respondents. The characteristics of this sample were as follows:

* Their main degree subjects were science, technology or engineering.

* Their first jobs after graduation were classified as being typical of those held by people with such degrees, e.g. a chemistry graduate becoming a research chemist in industry.

* They were chosen as changers who may have shown flexibility because their latest jobs held in 1977 came under a different category of the UMS classification, which was based on a classification of 143 headings based on the 1971 Census of Population.

* (A further geographical criterion was added for convenience and cost reasons; only those resident in England or Wales in 1977 were eligible for inclusion in the sample).

Eventually the UMS were able to run a program defining this sample, which selected a list of 148 eligible potential respondents.

5.3.2 The Questionnaire

The object of this first questionnaire was:

1. To make contact with a sample so that they could be used in further investigations.

2. To see if the respondents agreed that they had made occupational changes.

3. To obtain their work histories.

4. To explore whether the typology of change developed in Chapter 4 made sense to the participants.

5. To follow up the working lives of the graduates since the last survey in 1977.

To succeed, it also needed to be short enough and simple enough to encourage a high response rate.

A draft questionnaire was designed as the result of both the literature search previously described (Chapters 2, 3 and 4) and the pilot study (Chapter 4). This was piloted with the respondents from the pilot study and various other academics, a total of twelve people, who were invited to comment freely. The outcome of this exercise was:

1. To emphasize the need for instructions to be unambiguous without becoming condescending.

2. To reveal how complicated some people's work histories were likely to be.

3. To confirm the need for a short, easy to handle format which included space for people to write comments if they wished to do so.

The questionnaire was refined, and the final version plus the accompanying letters are reproduced in Appendix 2. The questionnaire was based around a self report of the work history. This required the respondent to fill in details of all the jobs they had held since graduation, with dates of entering and leaving, as would be required on a job application form. An example was provided.

Respondents were then asked to indicate which of their job changes constituted an occupational change, defined as:

> A different job in a different field. We do not mean a promotion or a change of employer within an occupation.

They were then asked to classify these changes into Categories A, B, C and D, which were the Involuntary, Opportunity, Mismatch and Personal Value Change Categories developed in Chapter 4. These categories were introduced as follows:

> Because we are interested in investigating the choices people make during their working lives, we would like to know more about the <u>major</u> reasons behind your Occupational Changes. We appreciate that it is often difficult to pin down exactly why you did something,

especially when it happened some time ago. However, from studying previous research and some preliminary discussions and interviews, we think it may be possible to group people who make Occupational Changes into four categories. This would be done by taking their major reasons for making each change. Now we need your help to see whether these categories make sense, and whether they can in fact cover all the situations you have experienced.

A category for "Other - please specify, was also included, so that respondents were not forced to use categories they did not like. This page of the form is shown as FIGURE 5A.

The questionnaire was approved by AGCAS and UMS without any alterations, and was sent out by UMS in 1980. A prepaid envelope was enclosed, and one reminder was sent 2 months later.

5.4 Stage 2: the Case Studies

The evidence already presented determined that the study had to be exploratory in nature, since ideas about the phenomenon of occupational change are diverse, ill assorted and often contradictory. Only one previous study of British adult occupational changers could be traced (Collin 1983, 1984). Given the thirty eight change factors already cited (Chapter 4, Table 4.1), very few, if any, assumptions about the nature of occupational change could be made. The first essential need was for a detailed description of the process or processes involved. Assuming that sample definition and access could be achieved satisfactorily, a suitable strategy had to be chosen for the exploratory investigation (Stage 2).

5.4.1 The Case Study Approach

A mainly qualitative case study approach seemed the most appropriate. The more traditional alternative would have been a detailed large scale survey, but there were two strong arguments against this. First, with thirty eight possible change factors, some contradictory, the resultant structured questionnaire would have been extremely long and unwieldy. Secondly, there was no obvious source for a population of changers large

FIGURE 5A

A PAGE OF THE CONTACT QUESTIONNAIRE, SHOWING THE CATEGORIES SUPPLIED TO THE RESPONDENTS.

Category A :- I had to leave that job, for reasons essentially outside my control, such as one or more of the following:-
(i) Fixed term contract ended.
(ii) Redundancy.
(iii) Age limits for that job reached.
(iv) Accident or illness prevented me from continuing.
(v) The job was moved to another part of the country where I could not move, or did not wish to do so.
(vi) I had to give up work because of pregnancy, or to look after sick relatives.
(viii) My family circumstances had changed considerably, so that I could not manage on the income from the job.

Category B :- I left that job because, although I was reasonably well suited, I saw an opportunity that was too good to miss in another occupation.

Category C :- I left that job because it had never really been what I wanted; I was mismatched with it.

Category D :- I left that job because I had gradually become less suited to it.

NOW, keeping these categories in mind, look back through your Work History Chart. For each Occupational Change Point you have identified please place a tick in the Category Box which most closely describes your major reason for changing your job. Only in really exceptional circumstances, if you really cannot fit your reasons into one of the Category Boxes, then write a note in the space provided..

OCCUPATIONAL CHANGE POINT NUMBER	CATEGORY BOXES A	B	C	D	Other : Please specify-
1 The major reason was	☐	☐	☐	☐	
2 The major reason was	☐	☐	☐	☐	
3 The major reason was	☐	☐	☐	☐	
4 The major reason was	☐	☐	☐	☐	
5 The major reason was	☐	☐	☐	☐	

enough to generate reliable statistical data on so many potentially important variables.

The case study method was chosen as the first step in the project:

1. Because it had the potential to yield rich descriptive data from in depth interviews.

2. Because the definitions of career, change and voluntary change discussed in Chapter 1 could be checked against the accounts obtained.

3. Because it offered a chance to evaluate the typology of change types (Chapter 4). Respondents could give detailed descriptions of their experiences as well as providing the basic demographic information about themselves and their work histories that was collected by the Contact Survey (Stage 1).

The plan was to carry out a series of in depth interviews with selected respondents, in order that their descriptions of the experience of voluntary career change could be used to suggest explanations for the flexibility shown. Selltiz et al (1964), discussing case studies wrote:

> One attempts to obtain sufficient information to characterize and explain both the unique features of the case and those which it has in common with other cases.

The investigation was thus intended to become more focussed as it progressed. Progressive focussing is defined as "the development, refinement and perhaps redirection of one's research ideas in accordance with what is discovered as field work progresses" (Jupp and Miller, 1980).

This is in accordance with the ethnographic approach described by Glaser and Strauss (1967) as the discovery of grounded theory.

> By attempting to ground the theory, the researcher attempts to find out what explanation schemes are used by the subjects under study to make sense of the social reality they encounter. (Glaser and Strauss, 1967)

This results in:

> An explanation framework...marked by a concern with discovery rather

than verification. (Filstead, 1979)

This suited the intention of the research, which was to attempt to find out what explanation schemes were used by graduates to make sense of their occupational careers when they had shown occupational flexibility.

5.4.2 Defending Qualitative Research.

It is probably this lack of emphasis on verification that explains why qualitative research has never been very highly regarded by social psychologists, despite much discussion over the last fifteen years about over reliance on quantitative methods (e.g. Kelman, 1968; Elms, 1972), and the need for a 'new paradigm' (e.g. Harre and Secord, 1972; Armistead, 1974; Reason and Rowan, 1981). The problem seems to be that psychologists evaluate qualitative research methods as having low validity. To consider this argument, we need to look at the origins of the 'new' movement in psychology. It probably springs from the popularity of George Kelly's Personal Construct Theory (Kelly, 1955; Bannister and Fransella, 1971). Kelly did not consider it appropriate to compare the perceptions of different individuals, as can be seen from some of his basic postulates:

> A person's processes are psychologically channellized by the ways in which he anticipates events.
>
> Persons differ from each other in their construction of events.
>
> A person's construction system varies as he successively construes the replication of events.

In the course of arguing for such an idiographic psychology, (which was highly appropriate to his clinical background), Kelly condemned the definitions of reliability and validity as used by his more conventional colleagues:

> Reliability is the measure of the extent to which a test is insensitive to change. Validity is the capacity of a test to tell us what we already know.

This however need not mean that qualitative research is only suitable for an idiographic psychology and cannot have any validity beyond this. For example, Kelly himself gave us the commonality corollary:

> To the extent that one person employs a construction of experience which is similar to that employed by another, his processes are psychologically similar to those of the other person.

It does mean that we have to alter our ideas about validity, so that we can follow up Kelly's recommendations that people's accounts of events and experiences can be taken as data. Many social scientists would agree that they should be. Clinical psychologists and psychiatrists rely on conversations to some degree in their interactions with their patients, the actual degree to which they do this varying with their theoretical orientations. It is also clear that anthropologists and some sociologists have been collecting and validating accounts, as well as other forms of qualitative data, since long before 'new paradigm' psychology was thought of. The similarities between the symbolic interactionism of Mead and the Chicago school and Kelly's constructive alternativism as perspectives on the social world are considerable. Not surprisingly, these latter two disciplines have much to teach us about how to use accounts as data.

It follows that, if appropriate levels of validity, including ecological validity, can be established for accounts of experience, then discovery of grounded theory may lead on to attempts at generalisation. This is described by Diesing (1981) as moving towards holistic theory:

> There are thus four levels in the development of holistic theory as one moves from the specific to the general; the theme, the case model, the typology and the general theory. General theory takes its place as the highest level of explanation. Themes are discovered from data, and are linked together in pattern models which primarily describe, but contain also a level of explanation; models are grouped into typologies, which provide a higher level of explanation; and these are explained by general theory.

Thus this methodology offered the potential for moving towards generalisation, as long as any themes that emerged from the data could be linked together into models that contain a level of explanation; it was also possible that such models might become associated into a typology to move towards a further level of explanation. The final move towards a general theory was not contemplated, given the scale of the research project, although it was thought likely that it would be possible

eventually to speculate about the implications of such a move.

5.5 Stage 3: the move to Quantitative Methods

The third stage of the research involved the use of some quantitative techniques to explore the ideas on flexibility in occupational change that were to be generated by the case studies (Stage 2). A new sample of graduates was used at this stage.

The move towards quantification always involves potential difficulties, as complex thematic data has to be transformed into operationalisable variables. Some degree of differentiation is inevitably lost. There is also the problem of integrating and interpreting results from research methods which originate in differing philosophical traditions.

5.5.1 Mixing Research Methods.

The decision to make considerable use of qualitative methods was never seen in any way as excluding the possibility of quantification. It was simply intended to articulate procedures which, while quite often carried out, are not used to their full advantage by social psychologists. Widening the range of methods used by integrating qualitative and quantitative techniques can only be of benefit to a an applied, practical social psychology.

Nevertheless, some researchers claim that using a mixture of methods is a mistake, because the underlying philosophies of qualitative and quantitative analyses are mutually exclusive. This idea, that there is an essential dichotomy between the two types of method, is thought to have arisen because of confusion over the relationship between methods and paradigms, as Cook and Reichardt (1979) clearly describe:

> It is assumed that a method-type is irrevocably linked to a paradigm.... that is, because they see the work in different ways, researchers must use different methods of inquiry...one must choose...But is there an inherent inconsistency in subscribing to the

philosophy of one paradigm but employing the methods of the other?

They see the confusion as traceable to Kuhn's definition of a paradigm as a world view:

> Paradigms are also normative, telling the practitioner what to do without the necessity of long existential or epistemological consideration. (Kuhn,1970)

Cook and Reichardt accept this definition, but point out that it has been too rigidly interpreted; research method is not indissolubly linked with one paradigm. Instead the link is a question of definition and practice. They derive a table of eleven common misconceptions, (TABLE 5.1), and then demonstrate that these can all be refuted.

Their most important points can be summarised as follows:

* There are two meanings of subjective. In its sense of being influenced by human judgement it must apply to all types of research, while in the sense of the tapping of non-observable feelings and beliefs, this can be associated equally with both the methods under discussion.

* Case studies can supply evidence in support of theories, and quantitative work can be used to generate new theories.

* No recording device, from a ruler to the human eye, is inherently valid and reliable under all circumstances, the extreme demonstration of this being the perceptual illusion.

They conclude that:

> The attributes are not inherently linked...paradigms are not the sole determinant of the choice of methods...Methods and paradigms are logically separable..there is no need for a dichotomy between the method types and there is every reason to use them together.

In other words, it may be simply habit and familiarity that influence researchers to use only those methods that they associate with their preferred philosophies. It is equally possible to assume that several of the different models of human beings derived from these philosophies can be relevant to a research investigation, according to the stage which it

Table 5.1. COMMON MISCONCEPTIONS ABOUT METHODOLOGY

(from Cook and Reichardt, 1979)

Attributes of the Qualitative and Quantitative Paradigms	
Qualitative Paradigm	**Quantitative Paradigm**
Advocates the use or qualitative methods	Advocates the use of quantitative methods
Phenomonologism and verstehen: "concerned with understanding human behaviour from the actor's own frame of reference."[a]	Logical-positivism; "seeks the facts or causes of social phenomena with little regard for the subjective states of individuals."[a]
Naturalistic and uncontrolled observation	Obtrusive and controlled measurement
Subjective	Objective
Close to the data; the "insider" perspective.	Removed from the data; the "outsider" perspective
Grounded, discovery-oriented, exploratory, expansionist, descriptive, and inductive	Ungrounded, verification-oriented, confirmatory, reductionist, inferential, and hypothetico-deductive.
Process-oriented	Outcome-oriented.
Valid; "real", "rich", and "deep" data.	Reliable; "hard", and replicable data.
Ungeneralizable; single case studies	Generalizable; multiple case studies
Holistic	Particularistic
Assumes a dynamic reality	Assumes a stable reality

a. Quotes from Bogdan and Taylor (1975: 2). We would not necessarily subscribe to these descriptions of "phenomenologism" and "logical-positivism" (cf., Cook & Campbell, 1979), though such characterizations are widespread.

has reached and the questions that it is attempting to answer. In a discussion of these problems, the environmental psychologists Brown and Sime (1977) suggest a list of three criteria by which the acceptability of people's accounts of their experiences can be judged.

The first criterion is the degree to which the account mirrors the objective reality or reflects the perceived reality. This criterion is used in conjunction with the research objectives. If accounts of a physical disaster, such as a fire, are being collected to see how it happened, mirroring objective reality, (in as much as this is achievable) will be important. If people's ideas about social class are the subject of interest, then reflections of perceived reality must be the required focus. In the case of flexibility, the decision to concentrate mainly on people's ideas about their own occupational changes meant that the accounts were to be used to tap reflections of perceived reality.

The second criterion is that of internal consistency, and it refers to the degree of logical inconsistency and paradox in the account. This can be reduced by watching for contradictions during the account collection, and being prepared to negotiate these, as by well as checking the account for its consistency afterwards. In this research, this criterion was met by careful probing during the interviews if inconsistencies became apparent.

The third criterion is that of external corroboration, referring to the degree to which the account matches other information about events, such as evidence from other participants, documents and experts. This was met as far as possible by checking the details, such as jobs held and dates of events, against the Contact Survey information previously supplied by the interviewee.

Another useful methodological discussion is found in Hammersley (1983) which describes how ethnographers aim for verification and defend the validity of their approach. Both these texts make the point that it is important to report full details of how respondents were chosen, how the accounts were elicited, how accounts were transformed for analysis (if this occurred) and how they were analysed. All this is necessary when writing up research, so that the social science community can judge for

themselves how systematically the work has been carried out.

5.5.2 Stage 3 Procedures

The details of the analysis carried out at Stage 3 will be fully described in Chapter 11. Basically the data set used was obtained from a study of graduate career decision analysis (Cullen and Thomas, in press). These researchers used interactive computer programmes to examine the values used in career decisions by the same people on two separate occasions several years apart. The participants were also drawn from the UMS study, but there was no overlap with the sample used at Stages 1 and 2 in the present study.

6. RESULTS OF STAGE 1 AND USE OF TYPOLOGY AT STAGE 2.

6.1 Summary

This chapter describes the results of the Contact Survey (Stage 1) and some results from Stage 2, concentrating on the specific changes the graduates made, their beliefs about these changes and their use of the proposed typology.

6.1.1 Conventions used in presentation of data.

In the following chapters where interview data is discussed, the conventions used to present quotations are as follows:

* Starts a new quotation, i.e. one from a different respondent.

[123] represents the case number of the person who is being quoted. Within the brackets there may also be relevant comments, such as the jobs taken.

.../... Gaps where quotes have been edited for clarity.

6.2 Results of the Contact Survey (stage 1)

From the population of 148 eligible graduates, the response rate was 49%. The respondents identified 128 change points from a total of 288 different jobs held. The average number of jobs held since 1970 was 4, and the average number of occupational change points per person was 1.8. This was a strikingly high rate of change, since it had been expected that most people would have only one. However, on closer examination of the nature of the changes reported it was found that some appeared to be slight, perhaps a move between functions in a large organisation, or to a similar function in a different industry.

Since it was the psychology behind the moves that was of interest, rather than the information about who moved where, it was rewarding that 61% of respondents found the typology of change completely adequate to cover all their changes. This percentage includes those who reported no changes (7% of respondents). They were still willing to fill in and return the form indicating that there had been no such change points in their work histories. However, this result throws some doubts on the success of the occupational change filter, and/or on the UMS job classifications.

A further 18% used the categories, but for at least one of their changes they wrote some extra information in the 'other' box, to qualify their choice of classification. Including such people gives a total of 70% who found the change categories reasonably satisfactory. 14% had at least one change which they felt did not fit, for which they used the Other category alone. A small subgroup of respondents (4%) had changes that they wished to place in more than one category, sometimes with additional information. All these involved Category A, so were in some senses their enlargements on the notion of 'no choice' changes. Overall, the changes made were as shown in TABLE 6.1.

6.3 Case Study Procedure (Stage 2)

Since the contact survey showed that graduates could use the typology of change, the next step was to draw up a list of willing respondents repesenting the different kinds of change expèrience, who could provide depth case study material in their work histories.

The non-changers were obviously not relevant to the project , but this still left 65 people, too many to interview given the time and money available. It was decided that forty was the maximum feasible number for interviews. Respondents classifying their changes as Category A were included, first to check that this category did indeed refer to a 'no choice' change, as intended, and secondly because several of them had also experienced other changes.

It was decided that the respondents should be categorised by the first change they had made, assuming that this would be the flexible change away

TABLE 6.1. USE OF CATEGORIES OF TYPOLOGY

IN CONTACT SURVEY

Overall, 20% of changes fell into Category A Outside my control

38% " " " " Category B Opportunity

14% " " " " Category C Mismatch

17% " " " " Category D Personal Change

4% " " " " Category A + at least one other

9% " " " " Other

Respondents classified by their first change

Outside my control, category A	12.5%	of respondents
Opportunity, category B	43.0%	
Mismatch, category C	9.7%	
Personal change, category D	25.0%	
Other category	1.4%	
No changes at all	8.3%	

from the most typical career path for their degree subject. A proportional sample was then chosen, (See TABLE 6.2). This type of sampling was appropriate because it treated the Contact Survey sample as a complete population of science and engineering graduate changers. The assumption was made that the frequencies of occurrence of each type of change in the Stage 2 sample would be representative of the Stage 1 sample. Respondents were numbered within each category and selected for interview by generating random numbers. All the potential interviewees were contacted by telephone if possible. Seven had no telephones, and three of these declined when invited by letter. One respondent had moved and was traced to Scotland, so was excluded on grounds of cost. One was uncontactable, so he, the three refusals and the excluded person were replaced using the same means. Unfortunately, the Scots resident and one of the refusals were also the only females in the sample.

Interviews took place between June and November 1980. People were offered the choice of home or place of work for the interview, whichever they preferred. All interviews were conducted by the researcher, using as similar an approach and style as possible. Complete confidentiality was assured. All respondents consented to be tape recorded, but in one case this was impossible as the interview had to begin in a restaurant and continue in a car due to pressures on the respondent's time. An interview guide prepared before interviewing started is included in Appendix 3.

The interviews lasted from about one hour to nearly three. The format was open-ended, with the respondent being encouraged to do most of the talking. First they were asked to describe their present jobs (in terms of what they actually did all day, or on a typical day). Next, they were asked what they liked and disliked most about this work. The previous working life was then discussed, moving backwards chronologically, as in the pilot study (see Chapter 4), until the person found this too difficult. The interview was then switched to secondary school experiences for details of subject specialisation, and the story was followed through. At each job change, probes were made to elicit the alternatives considered, if these were not mentioned. At the end of the interview, respondents were asked 'Looking back on all this, how far ahead do you think you've planned what you've done?' and then 'Is there anything else that we've left out that you

TABLE 6.2 CHOICE OF INTERVIEW SAMPLE

People who replied and said they had made at least one occupational change = 65. Number required = 40.

Category	Proportion of respondents using this category for their first change	Number needed out of 40 to represent this category	Number finally interviewed
A	13.8%	6	*4
B	47.6%	19	19
C	10.7%	4	5
D	27.6%	11	11
Totals	100	40	**39

* Two people in Category A replied very late, after interviews had been arranged.

** 38 interviews are discussed in the text, because one tape was completely faulty.

think is relevant?'.

The interview transcripts were analysed in various stages. The tapes were listened to with care, making notes that could be used to annotate the transcripts where necessary. After transcription and typing were complete, photocopies were made so that annotations on various possible themes could be made on different copies. Highlighter pens were invaluable for noting sections that appeared to belong together, such as everything said about a particular change. Extracts on topics could be separated from the main transcript for coding into categories.

There were basically three ways of looking at the transcript data.The first was in terms of each person's complete account of their experiences, to get a holistic view of the individual's occupational career. The second type of analysis was in terms of each change that had been made, so that each one could be compared with every other change, both those made by the same individual and those made by all the others. This allowed changes to be examined for characteristics such as how drastic they were, and what reasons the respondent perceived for them. The third way was to look at the changes in terms of the proposed typology, so that all the changes classed as Category A by the respondents were considered together, and then all the Category B changes etc. For example, every sentence referring to a change was extracted from the complete transcripts. These typed extracts were then collated so that a description of each change was obtained, consisting of everything the person said about it at any time during the interview.These verbatim descriptions varied from a couple of sentences to one and a half pages of single spaced A4.

6.4 Characteristics of the Stage 2 respondents.

The characteristics of the respondents interviewed are shown in TABLES 6.3 to 6.6. Table 6.3 shows the variety in the times at which the men left full time education, which is further discussed in Chapter 7 Section 2. Table 6.4 gives the main subject of each respondent's first degree, as given on the questionnaires returned at Stage 1. Table 6.5 shows that engineers/managers in industry were much the largest group, followed by

TABLE 6.3. EDUCATION OF RESPONDENTS INTERVIEWED AT STAGE 2

Left school before A-levels	1
Left school after O-levels	8
Left sixth form before A-levels	2
Left school and took job	7
Left school and went straight to full-time higher education	20
Total	38

TABLE 6.4. MAIN SUBJECT OF FIRST DEGREES TAKEN BY RESPONDENTS INTERVIEWED AT STAGE 2

Mechanical Engineering	6
Civil Engineering	6
Electrical Engineering	4
Electronics	2
Electromechanical Engineering	1
Mechanical and Production Engineering	1
Chemical Engineering	1
Applied Chemistry	4
Industrial Chemistry	1
Chemistry	3
Physics	2
Physical Sciences	1
Metallurgy	3
Aeronautics	1
Ceramic Technology	2
TOTAL	38

TABLE 6.5 OCCUPATION OF STAGE TWO RESPONDENTS AT TIME OF INTERVIEW

Engineers/Managers in Industry	16
Lecturers, Teachers	7
Social Work, Probation, Police	3
Technical Sales	3
Computer Consultants (self-employed)	2
Civil Servants, specialised	2
Technicians	2
O & M	1
Pilot	1
Journalist	1
TOTAL	38

TABLE 6.6 PERSONAL DETAILS OF STAGE 2 RESPONDENTS AT TIME OF INTERVIEW

Ages ranged between 32 and 38, average 34 years.

30 were married, all but 2 with children

2 separated/divorced

6 single

TABLE 6.7 RESPONDENTS INTERVIEWED AT STAGE 2, GROUPED BY THE EXTENT OF THEIR OCCUPATIONAL CHANGES

Group One: Retraining required N = 4 (10.5%)

Interview number	Jobs before and after occupational change
269	Metallurgist - Social Worker
267	Mechanical Engineer - Airline Pilot
264	Systems Analyst - Probation Officer
232	Site Engineer - Police Constable

Group Two: Some basis in degree specialism, but day to day job very different from first occupation. N = 8 (21.1%)

203	Civil Engineer - Journalist
204	Metallurgist - Lecturer in F.E.
205	Design Engineer - Maths teacher
215	Quality Control - Technical studies teacher
225	Production - Maths Teacher
238	Municipal Engineer - Polytechnic Lecturer
252	Design Engineer - Maths Teacher
268	Design Engineer - Lecturer

Group Three: Field or sector of work altered, first degree specialism definitely relevant. N = 12 (31.6%)

201	Project Leader - O & M Local Government
207	Civil Engineer - Manager
210	Ph.D student - Assistant executive engineer
211	Production Engineer - Sales
218	Design Engineer - Patent Examiner
219	Development Chemist - Factory Inspector
229	Research and Development - Production Manager
233	Assistant Engineer - Computer Consultant
234	Research Chemist - Polytechnic Technician
241	Electronics - Research Statistician
246	Research Chemist - Technical Sales
259	Ph.D Student - Works Engineer

TABLE 6.7 (continued)

Group Four: Little change. N = 14 (36.8%)

206	Researcher	-	Process technologist (production)
216	Metallurgist	-	Production Foreman
217	Laboratory Manager	-	Production Manager
221	Design engineer	-	Project Manager
223	Researcher	-	Industrial Physicist
226	Design engineer	-	Chief Cost engineer
231	Ceramics research	-	Technical Manager
235	Project engineer	-	Maintenance engineer
240	Section manager	-	Project engineer
242	Research chemist	-	Technical Sales
243	Local authority engineer	-	Construction company
256	Design engineer	-	Project manager
262	Technical officer	-	Materials technician
265	Quality control	-	Production manager

teachers and lecturers. Table 6.6 summarises their personal details. No further questions were asked about background, but it was evident that all interviewees were house-owners. They usually lived on the outskirts of towns, and the majority of their wives did not work, but had done so before they had their children.

6.5 How great were the changes?

On filling in the Contact Survey form, each person had agreed that each change identified by them involved an occupational change point. This had been defined to them as "a different job in a different field. We do not mean a promotion or a change of employer within an occupation". Nevertheless it was obvious from the returned forms, and more so from the interviews, that some of these changes identified by the respondents were more drastic than others. An attempt was made to classify them on a scale of how drastic they were, to see if this contributed anything to the overall picture (see TABLE 6.7).

The most drastic changes are usually classified as those requiring retraining, where there is no overlap with previous work (see Hiestand, 1971; Clopton, 1972). Very few people had undergone such changes: only the social worker, the probation officer and the pilot. The policeman could logically be included in this category since there was no obvious overlap of skills. Although he was not formally retrained, his training was presumably carried out 'on the beat'.

Those who entered teaching, lecturing and journalism seem to form the next group. Some, for example the civil engineering lecturer, are using their degree specialisms to some extent, but their day to day jobs are very different to their previous ones, which were usually in industry. Some had taken further qualifications on changing occupation.

The third group had altered their fields of work, and sometimes their sector, e.g. from industry to administration, but were closer to using some part of their original expertise than the first two groups. The discrimination between these and the fourth group, who in many ways had made very little change, was the hardest to make. It often depended on the

interpretation of the individual case study by the researcher. Here in this third group there were researchers who became administrators or technicians, and engineers who became computer specialists or sales managers. They differed from the fourth group in that they gave the impression of having felt that their careers had changed; members of the fourth group were more likely to feel that their progress was entirely normal for their speciality.

The fourth group are those who, although filling in the form as changers, usually seemed a little surprised to be recontacted and interviewed under this heading. There were engineers who had become managers, and/or changed their specialist fields, perhaps from mechanical to electrical. There were also researchers who only took their original research posts as a normal means of entry to a company before moving towards management or production.

This was the largest group (36.8% of the sample), which suggests that occupational classification schemes are not a reliable guide to the subjective experience of occupational change. All the participants had agreed they had made an occupational change on the Stage 1 questionnaire (see Chapter 5, section 3.2), but they did not regard this as unusual enough to be worthy of investigation.

6.6 Beliefs about reasons for change.

In the derived typology, the categories A, B, C and D were only defined as "the major reason" for each change on the Contact Survey form (Stage 1). The interviews (Stage 2) allowed each change to be explored in more depth as an incident, consequently increasing its complexity as other reasons that were also important were elicited.

In the second type of analysis mentioned in Section 6.3 the unit of analysis was the change incident rather than the individual. Each of the sixty nine change extracts (everything a respondent said about a given change) was content analysed for the presence of any distinct beliefs associated with its occurrence. The term belief was interpreted as widely as possible to include specific shortcomings of the previous job plus

disliked features of any jobs that were turned down at the time of change, as well as attractive features of the job that was taken.

When everything said about a particular change was collated and content analysed for beliefs about the reasons for making the change, thirty eight separate beliefs emerged (see TABLE 6.8). This is quite a high number, due to the decision that if there was a definite doubt about whether two beliefs were in fact the same in meaning, they were left as separate. For example, feeling underoccupied and feeling bored were scored separately. They may in fact have been synonymous for some people, but there was a doubt that this applied to everyone. A person could have had a trivial job that kept him quite busy. It must be emphasized that the frequency of occurrence of a belief may bear no relationship to its importance to the respondents who mentioned it; beliefs were recorded in this way simply to give some idea of common themes as opposed to those that are more idiosyncratic.

It can be seen that geographical preference was mentioned the most. This was expressed either as a strong desire to live in a particular area, or as an aversion to moving into a region. Many people had returned to live in the part of the country where they grew up, and three had deliberately never lived or worked anywhere else.

The next most popular belief was that there was no future in the job or occupation that had been left. This was usually described as no chance to make progress. Sometimes it was a feature of the occupation:

> * I was becoming somewhat disillusioned about the prospects of developing further in metallurgy.

Sometimes it occurred as a block on promotion in a specific job, 'dead men's shoes', or:

> * Basically I'd got to the position in the company that the next step was to Board level../.. there was no way, unless I waited another five years, that I'd move into that position.

The third most frequent belief, Contacts, refers to people who gave contacts with their new employer as an important factor in taking the new job, e.g:

> * I came here to advise on a project../..that was my initial contact,

TABLE 6.8

BELIEFS OF RESPONDENTS INTERVIEWED AT STAGE TWO ABOUT THEIR OCCUPATIONAL CHANGES: FREQUENCY TABLE.

		Frequency
1)	GEOGRAPHICAL PREFERENCE	25
2)	NO FUTURE, lack of progress	23
3)	CONTACTS helped get the job	21
	MORE MONEY	
5)	PREVIOUS INTEREST in work done in new job	17
6)	MONEY UNIMPORTANT, less or the same in new job	15
7)	FAMILY PRESSURES	14
8)	COMPANY POLICY DISLIKED	13
	SATISFACTION LACKING	
10)	JOB OFFERED	12
11)	PEOPLE WORKED WITH	11
	LACK OF ALTERNATIVES	
13)	WISH FOR NEW/MORE EXPERIENCE	9
14)	LOOKED INTERESTING	8
15)	ANTI-SOCIAL HOURS, work encroaching on rest of life	7
	WISH TO USE EXPERIENCE, or training	
	DID NOT SUIT	
18)	UNDEROCCUPIED	6
19)	BOREDOM	5
	INFLUENCE OF FRIENDS	
	IMMOBILITY, feeling stuck	
	FEAR OF OVERSPECIALISATION	
23)	SECURITY	4
	FRUSTRATION	
	STATUS	
26)	Various idiosyncratic reasons, given by less than four respondents.	

it all went from there really.

Most of these contacts were incidental in the course of work, rather than carefully cultivated with prospects in mind.

More money is a self-explanatory belief statement, which makes an interesting contrast with the quite common and opposite belief: that the new job would pay less money, or that it would pay about the same and that this was specifically mentioned as being unimportant, e.g:

* I made the decision when I left engineering, when I took a drop in pay../..pay would come second.

* I took a drop in salary but I got a company car. It was a parallel move financially.

* It wasn't so much the money, that came right at the end. I didn't know how much they were offering at the start, so that wasn't the real carrot.

The other frequent category, Previous Interest, was used by people who mentioned having experienced some aspect of the work involved in the new job, and having liked this, e.g:

* I wanted to get back into the pure science.

* I had, during the sandwich part, become interested in computing.

The commonest beliefs here reflect a desire for a challenging job and a satisfying lifestyle. Interestingly, there is a high proportion of beliefs referring to disliked factors about the previous job, compared to beliefs about specific attractions of the new job, e.g. ten beliefs like 'no future' and 'feelings of immobility', to seven specific advantages like 'looked interesting,' 'security' and 'status'. However it must be kept in mind that a frequently mentioned belief may not have been of overriding importance to any of the respondents who gave it as one of a set of beliefs.

6.7 Use of the Typology.

Each type of change, as assigned by the respondent on the original questionnaire, was analysed separately, to see how effectively the typology had been used. Were they really using the typology as intended, or had they filled in the form quickly and carelessly, or even deliberately to mislead?

6.7.1 The Involuntary/No Choice Category.

Category A: I had to leave that job, for reasons essentially outside my control.

This category was intended to identify changes due to redundancy and other 'involuntary' changes outside the scope of the study of voluntay flexibility. Most of the changes reported in this category turned out to be due to redundancies or to the ending of contracts. These events had taken place some time ago, and all those concerned had quickly found comparable work. The category had therefore been used as intended.

6.7.2 The Opportunity Category.

Category B: I left that job because, although I was reasonably well suited, I saw an opportunity that was too good to miss in another occupation.

This category was intended for a person who had no explicit lack of job satisfaction but who became aware of a more desirable job that they perceived as attainable - the Opportunity category. No change in the person's goals or values was expected, but personal ambition was expected to be strong. In fact, it was found that Category B covered perhaps the widest range of experiences. Some were really promotions that involved a rather different area of work; others involved greater shifts, such as becoming a computer consultant for an agency from being an electronics engineer in industry; and the greatest shifts usually involved retraining, for example going to college to become a teacher.

Changers in this category were essentially expected to show a feeling of reasonable satisfaction with the occupation that they moved away from. In fact, this was only reported in half the incidents described. In the others there was some dissatisfaction with the previous job. Here it became interesting to try and distinguish dissatisfaction with the actual job being done in a particular organisation from a more diffuse dissatisfaction with the occupation involved. Dissatisfaction with the particular job was commoner in the sample than dissatisfaction with the occupation as a whole.

No change in goals or values was expected in this category, and this was true in all cases, except that one person had changed their goals and values some years before and had always intended to change occupation to match at some time.

In the whole sample there were ten men who were distinctly ambitious, and nine of these did use category B, suggesting they might have an above average awareness of opportunities. However some distinctly unambitious people also used this category.

Distinctly ambitious men seemed easy to pick out at interview. They had a general air of confidence and energy, and personified some or all of the characteristics required for the prime test of Achievement Motive, as described by McLelland (1972). (In McLelland's work, these characteristics are judged from projective tests, but his descriptions of typical themes were equally appropriate to these men's conversation.) The distinctly ambitious men clearly valued some or all of the following:

(i) outperforming someone else

(ii) meeting or surpassing some self-imposed standard of excellence

(iii) doing something unique

(iv) being involved over a long term in doing something well.

Using the evidence of such motivation, respondents were classified as distinctly ambitious, average, or noticeably unambitious.

Since value changes were absent, the changes described in the Opportunity Category could be categorised on two dimensions: the degree of dissatisfaction shown, and whether the person was actively looking for another job at the time the change occurred. It was found, (see FIGURE 6A) that distinctly ambitious people appear only on the left hand side of this diagram; they are, in a sense, always looking for another job. Probably after some time in any job, they begin to become dissatisfied. Two men mentioned a feeling of "plateauing":

> * Once one goes into a job provided you are self motivated you work extremely hard at it and job interest is on an inclining plane and it gradually tails off as you get used to the job. . ./. . .between two and three years the tailing off is starting; two it comes to a plateau and you can sustain that plateau for probably another two, two and a half years and then you begin to coast, then you begin to make excuses for not going out of the office, because you have seen it all before.

The experiences reported represent a continuum, from reasonably satisfied to extremely frustrated, and from seriously scanning all adverts and contacting job agencies to no effort expended to find out about any jobs. Dichotomising such dimensions is an oversimplification, but it was not at all difficult to categorise most of the changes using this pattern.

6.7.3 The Mismatch Category.

Category C: I left that job because it had never really been what I wanted; I was mismatched with it.

This was aimed at the person who moves from a job that had never been very satisfying, as soon as this becomes possible. This category was therefore expected to describe moves away from 'mistakes', and respondents did indeed refer to leaving dissatisfying jobs. Although the small numbers in this category make conclusions difficult to draw, the 'mistake' was usually the whole occupation, rather than the job or the employer. The changes reported tended to be broad in scope, e.g. from industry to teaching.

It had been expected that constraints on the original choice of occupation would be prevalent here; this was not the case. Instead, there

FIGURE 6.A

DIMENSIONS OF OPPORTUNISTIC CHANGES (Category B)

		WHETHER LOOKING AROUND FOR OPPORTUNITIES	
		Definitely	Not at all
FEELINGS ABOUT PREVIOUS JOB	Dissatisfied with job, maybe with occupation	12 (5)	2 (-)
	Contented	9 (4)	5 (-)

Total number of Category B changes = 28

Numbers in brackets represent changes made by the distinctly ambitious men.

were two routes to making a 'mistake' or mismatch:

(i) Choosing quite carefully, but finding the job is not at all as it was expected to be, e.g.

* It was a crazy company. They made all sorts of promises at the interview, and it paid far more than I was getting in R and D, but it was a definite non-job, for a glorified clerk, despite the title.

This also includes those who discovered that the work involved is not as suitable as they expected, e.g:

* I felt sure that was what I wanted to do../..but I decided it wasn't for me. I was getting far too specialised, I wouldn't ever be able to do a practical job down at the sharp end, I'd always be the boffin.

(ii) A second, less frequent category was the person who drifted into a job without much effort at considering alternative occupations, or to leave a disliked job:

* I didn't know what sort of a job to apply for, so I was picking out things at random and I didn't get any offers or any interest. I went back to university to do research, because they'd tried to get me to stay on.

Both these categories could lead to change quite quickly. A third category also appeared. One person had taken a long time to decide that his first occupation did not suit him after all, so he almost fitted category D better than this one.

One person did not fit any of these descriptions; he became unemployed but was not totally disillusioned with his previous occupation. He looked for work within it, but was reasonably choosy. He was unsuccessful, so moved for his wife's job, was persuaded to try teaching and liked it. He then saw how mismatched he was in industry.

There was no evidence that unambitious people chose any less carefully than the others; although one appeared in this category he later returned to the occupation he preferred. One ambitious person also appeared here, and he too returned after his 'mistake'.

6.7.4 The Personal Value Change Category

Category D: I left that job because I had gradually become less suited to it.

Here the person may well have changed their goals and values, and therefore felt that they needed a change to fit in with the new values. It was meant to pick up some degree of personal change, with some serious rethinking of the occupational life. Some respondents certainly did reflect this, e.g.

* At that stage I decided I had something else to offer../..the change to social work was very much a personal one.

But the majority described leaving a job that had become rather less satisfying as its content changed, or as it eventually became overfamiliar and thus less challenging.

Here there is obviously some overlap with the dissatisfied people in category B, so this is an area where both the ideas and the wording need more detailed attention. However, it does seem to represent feelings of 'it was time for a change', but for rather a mixed bag of reasons. Some people did not know what to change to at first.

Six of the fifteen changes in this category clearly involved some changes in goals and values. Three of these were more distinctly personal in terms of values, while the others were more in terms of goals. All except one person was dissatisfied with their job, and most of these reported having gradually become less suited. They were all actively looking for opportunities to move; the finding of a suitable job by chance was never reported. Three men has taken their previous jobs as a means to an end, to enter their companies or to remain with them after sponsorship. Most people had some idea of what type of job they wished to move into, either in terms of direct change to another field, or simply which characteristics of the present job should be avoided in future. The less ambitious people do not appear in this category. This does not imply that they stay put when dissatisfied, as they did make several moves in other categories. There were two definitely ambitious men here, both of whom had changed their goals and values to some degree.

6.6 Conclusions

The typology was usable, but could be improved by further modification. Questions to probe are especially necessary for Category C, e.g. Had you always been rather dissatisfied? Was it a means to an end, such as to enter the company?

Modifications suggested are that the typology should become:

B1. Chance Opportunity. The person was satisfied, and was not looking around, but had a good opportunity by chance. A possible example might be where an organization offers to move a promising person into a different sector that they had not thought of entering, but which provides good prospects.

B2. Opportunity and Ambition. The person was satisfied, but was looking around and saw an opportunity. They may have intended to change at some time. Such a person is likely to be ambitious.

B3. Time for a change. The person became dissatisfied, then looked around and found an opportunity. The job left may have become less challenging due to success and plateauing, or may always have been a means to an end.

C. Mismatch. The person was never particularly satisfied, and eventually changed. The previous job may have been a means to an end, or a total mistake. Whichever of these it was, the situation became so dissatisfying that anyone would have started to look around for something else.

D. Personal Change. The person has developed their personality considerably, and has then found a new and more suitable occupation. Some of these will be the drastic changes, such as metallurgist to social worker.

Category A, the no choice change, would be unaffected by these modifications.

Other conclusions were that there is some evidence here that careful choice of job and occupation did not always lead to job satisfaction

straight away. The prominence of beliefs about the disadvantages of the previous job or occupation when a change had taken place (see Section 6.6) shows this. People often saw themselves as moving away from unsatisfactory situations, rather than exchanging a reasonable situation for a more attractive one. There is also evidence that each type of person can appear in most categories, e.g. the definitely ambitious and the distinctly unambitious may use the same categories for their changes; also they may both make extremely drastic changes or very slight ones. It would be an oversimplification to say that Opportunistic changes are typical of ambitious men, or that only unambitious men make mistakes and become mismatched.

7. INTERVIEW RESULTS: THE EARLY YEARS.

7.1 Summary

This chapter concerns the findings at Stage 2 about pre work experience and occupational socialisation.

Just as any change belief is far easier to interpret given the complete incident to which it relates, any change incident can be understood more easily when seen against the life history in which it occurred. And the processes of career development, flexibility and adaptability are clearer when studied through the complete accounts of those who have experienced them.

The life histories were particularly effective in revealing the wide variety of ways in which these men, all of similar ages, arrived at the point of graduation at the same time in 1970.

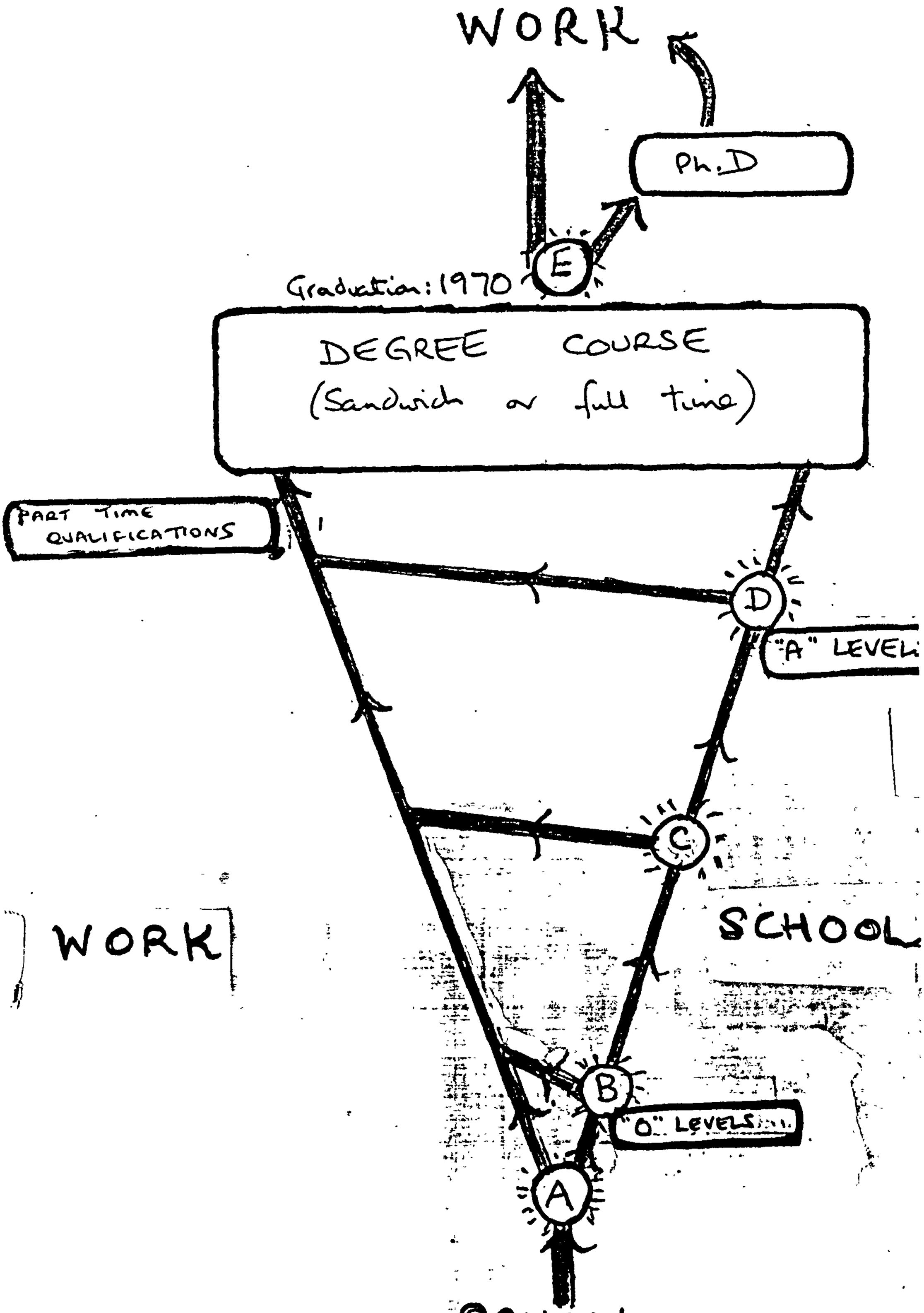
7.2 The Pre Work Experience

The men's routes up to graduation are summarised in FIGURE 7A. Each person's history can be looked at in terms of decision points. These were times when decisions have to be made that have relevance to the occupational career. This section attempts to interweave the known characteristics of the respondents with their perceptions as they reflected on various times when decisions were taken that affected their occupational careers. It is intended to demonstrate some possible connections between the pre work experience and later occupational flexibility. The influence of a middle class as opposed to a working class upbringing on educational choice and opportunity is well known and documented, e.g. Kelsall, 1972. The life histories reported on here

FIGURE 7A

ROUTES TO GRADUATION TAKEN BY RESPONDENTS INTERVIEWED AT STAGE 2.

Key is on page 93b.



KEY TO FIGURE 7A

Everyone in this study graduated in 1970 with a degree in Science, Technology or Engineering. This is how they got there:-

Decision Point E

Take a job or do a Ph.D?

35 took jobs — 3 stayed for higher degrees.

+1 ← — — — — — — 1 gave up after 6 months.

-2 — — — — — — → 2 returned after working for 6 months. 4 gained Ph.Ds.

Decision Point D

Take a job or do a degree course?

7 took jobs — 20 took degrees straightaway.

Decision Point C

Take a job or stay at school for 'A' Levels?

2 left — 27 continued

Decision Point B

Take a job or stay at school for 6th form?

8 left — 29 continued

Decision Point A

Take a job or stay at school for 'O' Levels?

1 left — 37 continued

illustrate some of the previous findings. The important influences are seen to be parental attitudes to education, peer group pressures and the total 'ethos' of the school community.

7.2.1 Subject specialisation.

The first decision for people who eventually took degrees in science and engineering was to specialise in particular subjects at school at the expense of others. Here, respondents often recalled in a considerable amount of detail which subjects they continued with, but this was often not seen as a time of specific decisions made by them: it had been decided for them. The constraining factor was usually the school syllabus. Most people did the average number of 'O' levels for their school class, so that if this average number was quite large, as at the more traditional grammar schools, a greater variety of subjects was covered. A few people reported that they later found they were restricted in applying to university because they had not studied any languages at 'O' level.

If people stayed on at school for 'A' levels, by far the commonest subjects taken were Maths, Physics and Chemistry. It seemed to depend on the school, (or the examination board) as much as the person whether two Maths subjects were studied or one.

The question of why this specialism was chosen, (as opposed to how) often produced difficulty on the respondent's part in distinguishing between what they liked best, and what they were best at doing. It was assumed that that is how things are, that's what you do. Comments were qualified by words to the effect that "that"s what I did well at, or at least better than I did at the Arts subjects'. Possibly many respondents believed their only chance of academic success to lie in the sciences. Most of these also said they liked the subjects, but it was not often possible to untangle whether they liked them for their intrinsic interest as subjects or because it was more rewarding to study something that enabled one to get good marks. Questions about the existence of an early interest in science and engineering were more likely to elicit remarks about hobbies (such as amateur radio, car mechanics or repairing things around the house) than memories of liking science subjects at school.

Overall, most of the respondents viewed subject specialisation as sensible and almost inevitable. 'the logical path to follow', 'the thing to do'. They mentioned 'going down a tunnel', 'drifting with the herd'. There was a pervasive norm within the school, of whatever type, that they worked hard at their best subjects and dropped the rest. How much further ahead they looked depended on both the school and the home background.

7.2.2 Parents

In the pilot study (Chapter 4), parental influences on the lives of the respondents extended as far as strong pressure towards certain careers. This was also a feature of Collin's study (Chapter 3, Study 16). Strong influences were not found in the present study. Most parents were reported as not knowing much about the subjects studied by their sons. Even those who had received higher education themselves would have been unfamiliar with much of the content of 'A' levels in Maths, Physics and Chemistry, because of the rapid advances made recently in such subjects. No one recalled parents exerting great influence on their choice of subject.

7.2.3 When to leave school

A decision that had a considerable effect on the sample was when to leave school. This decision could have been made before much subject specialisation took place, because the statutory minimum school leaving age at that time was fifteen. This meant that for some people, even staying on at school another year to do 'O' levels was a definite and distinct decision.

The main influence found here was socio-economic class, as measured by father's occupation at the time the respondent entered higher education. (N.B. In the case of those who left school early, this would have referred to some six or so years later, but if anything this should lead to an overestimation of class, if the father had changed his occupational status drastically during this time. There was an example of this in the pilot study).

All the respondents who left school without taking 'A' levels were classified as working class. At the extreme, one man even left school

without taking '0' levels:

> * I didn't come from the kind of background where it was recognised that you had to get so many '0' levels or 'A' levels. . very much working class, both parents working in mills. I was generally near the top of the class. The headmaster said 'you ought to apply' (for an apprenticeship). [268]

His parents saw no value in longterm prospects, and were amazed when he later changed his craft apprenticeship to a student apprenticeship, which had degree prospects but was poorly paid.

The rest of the working class parents, whether their sons left school before or after 'A' levels, were reported to have been favourably disposed towards education, but they were often totally ignorant of its potential for achieving a professional career:

> * Well you can do anything, as long as you don't go into the pits. . /. . They were sure they would help me in any way, but of course I didn't know what I needed. [259]

> * It was black magic to them. [246]

Respondents from secondary modern schools usually knew that they could have transferred to different schools to take 'A' levels, but only one did so.

This was a more typical response:

> * I could have but I felt as though I wouldn't fit in at the grammar school. . /. . I basically wanted to get out and earn a living really. [217]

In most cases, the leavers said they disliked school and wanted to get out to work and earn money as their friends were doing. Peer group influence, as would be expected with sixteen to eighteen year olds, was very strong.

> * (Staying on) It didn't really enter into it whether I'd go and do 'A' levels because most of the people I knew were leaving and getting jobs. It was really the done thing I suppose. [205]

> * All my mates were going. . /. . they were earning money. [229]

They gave various reasons for leaving, which can all be covered by the idea of cultural and familial expectations, and perhaps simplified into a general wish to feel adult. It is the image of becoming a self suporting adult, in other words, someone who goes out to work, that is valued. Contributing to the parental family's income was only mentioned specifically in two cases. All but one of the early leavers stressed that leaving after 'O' levels was a desired outcome for them. It was not a second best alternative to further full time study. All took first jobs which involved studying for at least ONC by day release (e.g. apprenticeships, laboratory work).

> * A lot of people go and get degrees, their parents have got degrees and they do it without thinking but in my case I didn't have that background, so it was natural not to go on with my education. (Left after 'O' levels). [240]
>
> * I was probably the only lad in the village at the time who had 'O' levels (Left after six months in the sixth form.) [265]
>
> * Most people thought I'd done quite well to get 'O' levels. . /. . I never seriously considered staying on. [205]

The respondents who stayed on at school to take 'A' levels did so mostly because it was 'the done thing' at their schools. Very few people they knew left school at sixteen. Some men mentioned having done better than they expected at 'O' level, and therefore thinking they might as well stay on longer. Another stayed because he felt he could improve. At least one only intended to spend a year in the sixth form, but found the work easier than he had anticipated. Several mentioned putting off going out to work:

> * I didn't fancy going out into the big wide world. [204]
>
> * I never made a conscious decision. I never thought of anything other. At our school you didn't leave in the fifth form, the only people that left in the fifth form were those that were carted off to the local nick. [221]

Others had far more positive reasons for staying. They were beginning to see their ways towards particular types of career:

* Merely what was required, it was just straight Maths, Physics and Chemistry. . /. . obviously to be a civil engineer you had to have a degree. [243]

7.2.4 After 'A' levels, what next?

After 'A' level results were known, futures became clearer. Here a great variety of experiences were recounted, from those who had always expected to go to university but were rejected by the institutions that had provisionally accepted them because their results were disappointing, to those who did better than expected and obtained last minute places on Honours courses.

Not everyone chose further study. Several people (seven) went straight out to work. Only one of these had made any applications for degree courses:

* There was only one place I ever wanted to go and that was Loughborough, as a sporting person, and so I wasn't interested in anywhere else. I only got two 'A' levels as it turned out. . /. . and I didn't get the qualifications for Loughborough so I left. I got a lab. technician's job. [246]

Four others said they had had enough of studying, but two would have liked to continue on to a full time degree but had not been helped to do so by their schools. Both these men had good 'A' level passes:

* The careers master invited my parents along, in advance of 'A' levels. He said, 'He ought to go to university . . /. . of course you can continue training in industry and you can reach the same level and you are getting paid while you are doing it'. (This family did not know that they could have got a grant for him to study full time, and the school did not enlighten them.) [211]

* The thing that was totally stupid is that nobody ever told me about university, it quite astounds me now, my parents knew nothing about university. . . /. . it wasn't a case of seeing Jimmy down the road going off to university and it'll be nice when you go. It wasn't until

I had taken on a student apprenticeship that it even occurred to me that it might even be possible for me to go to university. . /. . me and my mate got the best results for the school, and it wasn't until I told him that I'd agreed to go (that) the Headmaster said he could've got me a place in Cambridge. I got an A and two Bs. (The student apprenticeship led to a Dip. Tech. course, upgraded to a degree, on which he got a first, followed by a Ph.D.) [233]

The school was always a strong influence on (a) whether a university place was applied for at the appropriate time through the UCCA scheme, (b) whether those with lower expectations about their 'A' level results were advised about the new CNAA degree courses at polytechnics and about HND courses, and (c) whether the course applied for was sandwich based or continuous. Various school traditions and attitudes were mentioned towards degrees, from those that "counted heads" and pushed as many people as possible on to some kind of a degree course, to get names on the Honours Board, to those who made it clear they only valued pupils likely to succeed at the most prestigious universities. The influence of the Headmaster, and/or of a science teacher, in encouraging or discouraging applications in a particular subject, was sometimes remembered. The commonest remark was that there was little or no careers advice at school, although four people did remember helpful suggestions from careers teachers. Three grammar school men remembered distinct anti-engineering biases at their schools; in two cases, the headmaster was the source of this. Two other headmasters were remembered for disrecommending pupils for university entrance, but one of these did help later when three 'A' levels were obtained, by arranging a successful last minute interview at a new university.

By the time entry to a degree course should have been under consideration, most parents were described as encouraging their sons to do whatever they liked, but not pushing them, although a few were very keen on university. Most could give no specific subject related advice, unless they were themselves in industry in a professional scientific or engineering capacity, which was rare in the sample.

The subjects chosen for the degree course tended obviously to follow on from the choice of 'A' levels. An exception was the frustrated pilot who took the nearest substitute, aeronautical engineering. Several people mentioned keeping their options open, e. g. the scientist who chose a broad course at a new university so that he could choose between chemistry and physics after a year, and those taking engineering courses that ran general first years before splitting into electrical and mechanical. The electrical and civil engineers tended to have decided on their subject specialisation before applying, whereas those ending up on mechanical engineering gave a variety of explanations for their choice:

> * I thought, what's the easiest engineering course to get on to, and I chose mechanical. [256]
>
> * I wanted to do production engineering. When I came to it, there weren't so many (courses) doing at the time, so I thought perhaps it wasn't a very good field to get into so I eventually went on to mechanical engineering. [201]

7.2.5 University or Polytechnic?

The need to make a choice between universities or polytechnics was unusual; the most likely reason given for choosing a polytechnic straight from school was too few 'A' levels and/or low passes, or a lack of an 'O' level language. There were three exceptions to this: the aeronautical engineer who chose a polytechnic that specialised in his subject and was near his sponsors for placement, an electrical engineer who had to have an operation so could not have started at university at the usual time, but could start a sandwich course later, and a mechanical engineer whose sponsor specified a particular polytechnic course.

Once at polytechnics, two people actually started on HNDs and were later allowed to join the degree courses as their work improved.

Choice of university was a little wider for most people, and sometimes sporting interests or friends applying to the same place were mentioned as influential, as well as the academic reputation in the eyes of the school or of parents. Several people mentioned wanting to get away from home

"painlessly".

7.2.6 Sandwiches and sponsors

All the engineering courses were 'sandwiches' of one type or another, so this was not 'chosen' by the students. Those taking applied chemistry had decided this suited their practical talents and their interest in working in industry.

The sponsorship position was very varied, in that sponsorships were not necessary for all courses; some were college based, or allowed some college based students (i. e. those with no affiliation to any employer). Sponsors could be chosen from adverts, school careers advice and polytechnic advice: usually people went for "the big names, the names you know, like choosing a washing powder!" Locality was also important for some people.

The sponsors themselves usually stipulated which courses and institutions they were prepared to consider, and some only sponsored a course at one specified institution. Once on a sandwich based course, the student was assured of industrial placements. If he was not sponsored, and did not have an informal arrangement with any firm, the polytechnic would help him find a placement.

7.2.7 Returning to education after working

The ways in which people who had worked full time chose their degree courses and institutions contrasts strongly with the choices of the school leavers. These men were choosing on the basis of experience as well as expectations.

All the jobs entered straight from school carried an obligation on the part of the employer to send the employee on a day release course. This was usually the ONC (Ordinary National Certificate) in a subject closely related to the work. A part time student gaining high grades in ONC was eligible to apply for a degree course in a related subject at certain universities and polytechnics.

Some people said that they had known from the start of their courses that part time study could lead to a degree, such as the two men who had wanted to study full time after 'A' levels but had lacked information about higher education. Others realised during their courses that this was a possibility, either through being told by lecturers or through seeing older employees take that route. A few did not know until their results were discussed that full time degree level study was now available to them. There was also a group of older students who chose to proceed to HNCs part time from ONCs and later realised that transferring to a full time degree would be of benefit. Sometimes a decision had to be made whether to move away from the home area, if the course was not available locally:

* I didn't even know when I was sitting my exams that provided I got a marginal percentage in them, I could do a degree. [215]

* It was an obvious progression then from ONC electrical engineering to go for the electrical degree. [259]

* Because I'd got reasonably good ONC marks (Chemistry) it was suggested that rather than take this Works Managers course, I should apply for this new CNAA degree course in Ceramic Technology, so I did. It was the only course of its type in the country. (Already worked for a ceramics company). [229]

Those students who had started or taken HNCs had usually taken longer to realise that they needed degrees to 'get anywhere' at work:

* I was doing research and I got the senior blokes coming and telling me what to do and I objected to that. . /. . then I realised that I was going to be in the situation forever if I didn't do something about it. I had to go further. I was doing Physics all the way through and I just went and did a Physics degree. (Left company to do this.) [240]

* In terms of progressing within the company it was obvious that to have a degree was essential. [246]

* I never really became one who had responsibilities because I didn't have the academic qualifications. I needed to go to university full time. [269]

* I wasn't getting home until about 10. 45 two nights a week, I thought

there must be an easier way. . /. . looking at the people who'd passed HNC, they didn't appear to be really any better off in terms of the job content. [265]

Sometimes the firm that the student was already working for would sponsor the full time degree course, but this was not always the case. If the sponsorship was not forthcoming, the man left. Having worked in industry, these men had much clearer ideas of where they were going, and even more so of where they didn't want to end up:

* I wanted to get on. . /. . I'd determined then that this was the correct thing to do, that education was the way to get on in terms of a better job. I'd learned this thing of working hard and getting a job that gave you a little bit more leisure and a bit more time to yourself, sort of quality of life stuff. I'd learned that after my experience in that factory, I was damned if I was going back to that again, and this seemed a fairly good opportunity to get out of that treadmill. [205]

7.2.8 Discussion

The men in the sample entered their degree courses in science and engineering through many and various routes. The school influence was nearly always noticeable - to oversimplify, in a grammar school nearly everyone tried to stay on and get into university, while those who had been to other types of school had to be fairly sure of the benefits to stay on, and usually chose to leave and take a job. It needed positive action to stay, just as much as leaving grammar school at sixteen with good 'O' levels would have done for a middle class teenager.

Specialising in science was encouraged, but an interest in engineering was not as popular with teachers as one shown in the pure sciences. Subjects that were disliked were usually given up, and so specialisation became a case of what was left that you were good at and that fitted into the school syllabus, as much as being what was actively chosen. The end in mind was likely to be exam success rather than a particular career path.

Parents were usually encouraging but rarely able to help with advice and information. Family background often had some influence on careers

considered, but this was in terms of the routes that were seen as appropriate to attain them. Strong pressures from parents towards a particular career were not reported.

Men who worked before taking their degrees had to make a distinct choice to re-enter full time education; those who went straight on from school to university or polytechnic were usually 'doing the done thing', drifting along. Their only sense of choice was in which course at which institution, not whether to read for a degree.

The experience of the first job strongly influenced the move to study for a degree in those men who did not go on to higher education straight after school. This is an important part of the process of career development, and it will be further discussed in Section 3 on Occupational Socialisation.

7.3 Occupational Socialisation

It must be born in mind that the first full time work experience could have been before taking a degree, during a sandwich course or after graduation . People usually remembered this period of their lives in some detail. Occupational socialisation refers to the way in which we settle into our working lives, how we become 'a worker' rather than 'a pupil' or 'a student'. It is thought to be a crucial time for anyone aspiring to a professional career or work career, as defined in Chapter 1. Van Maanen calls it organizational socialisation, and describes it as:

> A breakpoint in which established relationships are severed and new ones forged, old behavior patterns forgotten and new ones learned, former responsibilities abandoned and new ones taken on. In short, breakpoints require the individual to discover or reformulate certain everyday assumptions about their working life. (Van Maanen, 1977)

In the sample there were examples of both good and bad experiences at this time.

7.3.1 Good experiences during occupational socialisation.

Some people spoke of positively enjoying their early work experiences and how this influenced them:

* This was real engineering, really at the sharp end of research. . /. . At a very lowly level involved in a design team, part of a much bigger project. . /. . We were under extreme security clearance. [238, scientific assistant, mechanical engineering]

* It was the practical aspects of chemistry, the analytical side I quite enjoyed, because I tend to be a bit of a perfectionist and it did seem to suit me. [219, lab. assistant]

* Everything began to fall into place. . /. . I knew exactly what I wanted to do and I've never lost my enthusiasm for it. [242, applied chemistry degree placement]

* I spent two years at college not knowing what civil engineering was. . /. . after nine months there (on placement) I was really hooked on civil engineering and really enjoyed it. . /. . I had a lot of responsibility. . /. . from then I stopped drifting. I knew what my final career was going to be and I'd got to get my finger out and get the degree. [207]

* I chose and got what I wanted. . /. . developing completely new products using any technique. . /. . very rewarding. [246, research chemist]

* Enjoyed that very much. . /. . you did have to be self starting. . /. . some projects which both you felt was useful and the ministry thought were useful. [206, industrial chemistry degree placement]

* In the laboratory, doing product and raw material control. . /. . found it rather interesting. Partly there was a certain mystique about the industry . . /. . everything always seemed to be very active. There were always problems, you were always busy and it was the complete opposite to the job I'd worked at (before taking the degree). [265, applied chemistry degree placement]

* (Fourth year placement) It was the first time that I did something

that was first of all permanent and secondly wasn't necessarily checked by somebody else. . /. . it was the first time you felt you were doing something useful. . /. . I thought at last I have got something that I can stay with. [235, electromechanical engineering degree]

* (The course was) hard work but enjoyable and it was in something that I was beginning to get interested in and I could see it being applied because I was going back during the summer to where I could actually see it in action. [221, degree in aeronautics]

* I was at two good places really I suppose. The first. . /. . was doing metallurgy on the shop floor for engineers, problems with materials, this type of thing, and the second one was very much research. . /. . so you had both sides of the coin really. I found it very interesting doing pure research but I got a bit bored with it, although I did it and I quite enjoyed it, I thought well I can't do this all my life. Decided that the first type of position suited me more. [216, metallurgy degree placements]

7.3.2 Bad experiences of occupational socialisation

The bad experiences of occupational socialisation were all remarkably similar, whatever type of work was involved.

* It was all pretty boring. . /. . I would be put with an engineer and would just traipse around the countryside watching what he was doing, never did any constructive work, was never given the opportunity. . /. . I don't think I did a productive piece of work all the time I was there. [233, electrical engineering degree placements]

* It was absolutely awful. . /. . I didn't have anything to do. I spent that year being loaned out doing various odd jobs and I somehow felt that I hadn't done anything at all that was of any use. [210, scientific civil service]

* Having spent the time putting it in your brain, you're not actually using your brain to bring that information out to benefit yourself or the company. I found that it was too mundane altogether. . /. . I was using such a little percentage of what I'd learned at the University.

[267, mechanical engineer]

* There wasn't enough to fill the day, the work was simple, didn't take a lot of brain power. . /. . I was going to work on a Monday and thinking roll on the weekend. I thought, you're wishing your life away. [215, quality control engineer]

* I think one of the best pieces of training was, it taught you to cope with the boredom. [252, mechanical engineering degree placements]

* I found it boring after a while. I was given something to do. . /. . I found that I'd done the job in half the time and they'd say, go away and think about this and come back tomorrow. (Later) It didn't seem to get any better. [218, design engineer]

* I was still drifting, still waiting for them to tell me what to do. They weren't crying out for people but they found me a job. . /. . a dogsbody. . /. . not using much of my degree. [225, commercial engineer]

The contrasts with the good experiences are obvious here, and illustrate Hall's comments about the need for challenge in the early careers of graduates (see Chapter 4). Hall's work was carried out with U. S. managerial graduates, but his conclusions are equally applicable to this sample. Hall quoted results from a number of different studies to support his thesis that challenge is very important to the way a person's career develops. In one of these, (Berlew and Hall, 1966) the conclusion was:

> The more challenging a person's job was in his first year with the organization, the more effective and successful he was even five or seven years later.

Parsons and Hutt's work on graduate job changes (see Chapter 4) supported Hall's. Their conclusions were that:

> Many graduates changed jobs because they felt their abilities were not being used, were dissatisfied with the general nature and pace of work, and saw limited opportunities for career development ahead of them.

7.4 Conclusions

Returning to the present sample, it was as though the men had been willing to study hard throughout their education, whether full or part time, continuous or interrupted, without having a precise definition of where this was taking them in occupational terms. They knew that graduates could expect well paid jobs with prospects, and by graduation they knew which fields they were specialised enough in to enter. But they often did not have clear ideas of what the work would be like, or where it would lead them. They found the world of work to be a qualitatively different experience from anything that they had known. Those that had bad experiences soon found out what they did not like. Hall calls this discovery reality shock, "the clash between high expectations and frustating on the job experiences".

We might assume that those who suffer this reality shock badly would be likely to change jobs, but would they necessarily make occupational changes? The study by Parsons and Hutt suggests that they might, as half their respondents did make such a change.

FLEXIBILITY IN GRADUATE CAREERS : AN EXPLORATORY STUDY

THE WORK CAREERS OF A SAMPLE OF 1970 GRADUATES.

Volume 2.

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A thesis submitted towards the degree of Doctor of Philosophy
in the discipline of Psychology, Faculty of Social Sciences,
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8. INTERVIEW RESULTS: PROGRESS.

8.1 Summary

By inspection of their work histories, the sample could be divided into three groups. There were early changers, evolvers and later changers. Within these groups, there were also various subgroups, such as those who had left an occupation and then returned to it, or tried several before settling.

This chapter looks at the experiences of each group, (see TABLE 8.1), and follows them through their careers until the time of interview, ten years after graduation.

8.1.1 Early changers

Of the ten men who were particularly dissatisfied with their early work experiences, eight changed their occupations within two years, and the other two changed eventually. The early changers said:

> * The particular work I was doing and the capability that I had. . /. . were mismatched by a factor of ten which was most frustrating. . /. . frustrating because guys that I'd been on the course with (as an undergraduate), that I didn't have a very high opinion of were now my boss. . /. . and I didn't actually feel too inclined to work in that environment any more. You probably know the term dead men's shoes. . /. . I felt that I'd been fair to them and I'd given them the opportunity to make use of me. . /. . I felt justified at that stage to move. . /. . I went to a couple of agencies.
>
> Interviewer: Did you have much idea, until you started looking, about what sort of jobs you could get?

TABLE 8.1 RESPONDENTS INTERVIEWED AT STAGE 2 CATEGORISED INTO PROGRESS GROUPS

Group one: Early Changers (23.7% of sample)

Interview Number	First Job	Present Job	Type of first change
205	Design Engineer	- Maths teacher	D
210	Civil Service Researcher	- Assistant Executive Engineer	C
215	Quality Control	- Technical Studies Teacher	D
218	Design Engineer	- Patent Examiner	B
219	Development chemist	- Factory Inspector	B
225	Production	- Maths Teacher	B
233	Assistant Engineer	- Computer Consultant	B
267	Mechanical Engineer	- Airline Pilot	B
168	Design Engineer	- Lecturer	B

Group two: Evolvers and Returners (52.6% of sample)

Evolvers

201	Project Leader	- O & M	D
206	Research Chemist	- Production Technologist	D
211	Production Engineer	- Technical Sales	D
216	Metallurgist	- Quality Control	D
217	Technical Officer	- Production Manager	B
221	Project Engineer	- Project Manager	B
223	Ph.D	- Industrial Physicist	D
226	Design Engineer	- Chief Cost Engineer	D
231	Ceramics Research	- Technical Manager	B
235	Project Engineer	- Maintenance Engineer	B
240	Section Manager	- Project Engineer	B
242	Research Chemist	- Technical Sales	A

No, no idea at all, none whatsoever. . /. . I'd never worried about getting a job. . /. . . I suppose it was a bit of a shock to me to suddenly find that I wouldn't have an interesting job. . /. . even though after I'd resigned they made token gestures to keep me to stay, I still left at that point. [233, Assistant Engineer to Senior Consultant, software house]

* Quite an interesting job, but I can remember feeling within a week of joining that this was not going to be me for the rest of my life. . /. . I saw the older individuals there and I could see no future. There was always a steady job there, but I would see nothing more of industry, I would not meet people on whatever basis and I could see no definite career advancement. . /. . I think it would have been similar in any establishment that I would have joined. . /. . I had only really started forming ideas of what I wanted to do for the rest of my life I suppose. [219, Development chemist to Health and safety inspector]

These men had started to think seriously about their work careers for the first time. They had experienced reality shock and reacted by gradually evaluating the careers they had started. One important aspect of this evaluation seemed to have been an increased sense of time; they realised that this disagreeable experience was not limited to a set period, unlike their degree courses. They began to see their adult working lives stretching before them:

* One of the things I said to myself from the beginning was that I would look round around for something that I enjoyed doing. You know a man spends eight hours a day working, five days a week. . /. . a man spends a large proportion of his life actually at work. . /. . so when I found that I wasn't completely satisfied with what I was doing at the time, I looked round for something else. . /. . I would've been looking for a better organised place. . /. . that was what I would've liked to have done had I stayed in industry, but at that time I saw the advert wanting pilots so I thought well I'll try for that. [267, Mechanical engineer to Airline pilot]

Interestingly, the two men who did not seem to have evaluated their careers seriously at this time both moved to jobs that were fairly close to their original ones. One went from commercial engineer to progress chaser (a job in production), and the other from research in the Civil Service to postgraduate research. Both these men moved again within two years, and these second moves were greater changes. The production engineer took a course in management, could not find a congenial post and eventually became a teacher, while the researcher who had always disliked research became an executive in a nationalised industry:

> * I was getting disillusioned, I thought well, can't carry on like this, I'll leave. . /. . When I saw B----- university advertised for students for their course. . /. . I banged off an application, had an interview, got a place on the course.
>
> Interviewer: What did you go into it for?
>
> Respondent: To get out of the factory. I needed a qualification in production management and this one was offered to me so I took it, without really investigating the alternatives. . /. . Actually taking decisions in my life and changing my life, the first major one was to actually hand in my notice at the company to go and do this course. I hadn't really thought about what the course was or anything it was just getting out of the company because it was a dead end, we were firefighting. We were battling all the time, and I certainly didn't want to do that for the rest of my life. Because I could have done, there were men in the department who had been doing it for thirty years and according to them it had always been the same. . /. . so I wanted out of that, I didn't want to do that.
>
> (After the course) I never wanted to be a teacher. . /. . I was on the dole over six months. . /. . looking for a job in production management in a small factory. . /. . then when ILEA were advertising I was relaxed, and as my interview technique isn't very good, but because I wasn't particularly concerned about this job, didn't have any feeling about it, I was relaxed and I got on very well. . /. . she (the interviewer) decided I would make a good teacher. Any skilled

and responsible people like that can decide I'm going to be a good teacher, or could be a good teacher and I'm quite prepared to agree with them.

Interviewer: You'd given up hope of getting the kind of job you'd wanted originally?

Respondent: Yes, because I was completely disillusioned. . /. . I hadn't been offered anything. [225, Progress chaser to Masters in Business Management to maths teacher]

* I wrote half heartedly around a few places as I got nearer to the point of deciding to leave but I wasn't really getting anywhere, because I didn't really know what kind of a job to apply for, so I was picking out things at random and I didn't get any offers at all or any interest. . /. . and I knew I could go back to the University because they'd made it quite clear that they would welcome me. So I went back. . /. . It seemed a good idea at the time. . /. . then I realised, that year convinced me that research was not my scene at all and I really loathed it after the first three months, and I couldn't work up the enthusiasm to spend years doing it, and it also became obvious that there were many people who had become so specialised that they were not very much good to anybody. . /. . and they weren't necessarily commanding better salaries. But then I thought. . /. . what do I do?. . /. . I started applying in earnest to many firms. They were offering a very, very good salary and I thought well if it's awful, the salary's good, I'll be able to tolerate it for a few years, and it turned out to be a good job anyway. [210, Scientific Officer, Civil service to research student to assistant executive engineer]

The other two men who were dissatisfied with their occupational socialisation both took far longer to react to their dissatisfaction. They attribute this to their personalities:

* I was there for four years. I'm not the type to be discontented. . /. . I take things as they are, it's just that I started to examine, I wasn't particularly ambitious within engineering, I could never see myself getting on, in fact it struck me that the longer I was an

engineer, it wasn't what I was really cut out for, I suppose I'd been aware of it all along, but the longer I spent actually doing it for a living, it became more apparent. . /. . plus the fact that there was never any sign, no structure, as it was at the company. You could literally have been in the same position for any length of time. . /. . You could have said that the company was peculiar. . /. . but seeing another company (in an earlier job) in fact part of the job was travelling around places, I think it was much of a muchness. . . /. . I realised after a while that money wasn't a prime mover as far as I was concerned, and then I started looking at other things, and as I say, teaching came up. As I say, if anything it was just a blinding flash, I just thought well yes, I quite fancy teaching, and then applied. . /. . there were a few personal things as well in choosing teaching, the girl I was going out with at the time is also, she left another job going to teaching. [252, Design engineer to teacher training to maths teacher]

* I suppose to one way of thinking it took me about nine years to make up me mind, it's something that I always sort of fancied having a go at. . /. . really I suppose I still hadn't made up my mind what I wanted out of life. . /. . I've never been consistently confident about my capabilities. . /. . this time I started applying seriously outside (the organisation). . /. . And after six or seven months of looking around, I put my notice in and applied for the Police Force. . /. . it was something that I'd been toying with the idea really from college. . /. . I toyed with it earlier but the pay was always a little bit too low, they'd had a pay rise about twelve months before that brought it somewhere near what I was getting and I was approaching the age limit, so I decided to leap across and join them. I put my notice in and applied more or less at the same time. . /. . I had an interview some three to four months prior, about the time my secondment finished. . /. . so I was fairly certain of getting in. [232, Four jobs in production at British Steel to police constable]

Sometimes early changes were forced by redundancy, but this did not cause any long term problems as in the early seventies unemployment levels were very low, especially amongst graduates.

* It was very rewarding but I was made redundant there. The whole R and D department closed which was catastrophic for my part. . /. . it was very sudden indeed. I signed on with the PER who quickly sorted me out a job. . /. . I would have taken anything at that sort of stage. . /. . as it turned out this was ideal. [246, research chemist to technical manager]

There was also one early changer who was not particularly dissatisfied:

* I must say that I've always had a yen to become a teacher of some kind and when I was younger of course I didn't really understand how to. . /. . Between about sixteen and eighteen, I used to teach in the evenings. . /. . and I found out that apparently I was reasonably good at it and I certainly enjoyed it, I thought, right, I'll get a bit of experience in engineering first and then I'll go in for teaching, but the opportunity came a little bit earlier than I thought, but we were reaching the end of the particular project. . /. . and at this point I saw the advert for this lecturing post. . /. . I had this yearning to teach as well and I think that was becoming a bit uppermost at the time and it just happened that I saw this lecturer advert, if I hadn't seen that, but seen say, a post for a senior project leader, which I was. . /. . I would've applied for that, but this one came along first. [268, design engineer to lecturer, electronics and maths, now senior lecturer]

8.1.2 Evolving careers.

The largest group of men had not moved very far away from their original degree subjects. They often described their careers as evolving gradually from stage to stage. Sometimes they had entered large organisations in functions that they hoped would lead towards specific areas of work; others discovered virtually by accident what they wanted to do.

* I hadn't really got any idea when I'd gone into that department. I just knew that I wanted to work in the manufacturing part of the company. I didn't know where I wanted to go from there. And I started to believe that I wanted to be a supervisor. I got on very well with

the people, the shop floor and I felt that I could become a good supervisor. . /. . . I prefer to work at the sharp end. . . I'm certainly not cut out to be a research chemist. [206, research chemist to process technologist to shift technologist]

* This is the only company I worked for since I got my Ph. D. I started in the technical area, I couldn't see myself in production at all when I started. I saw myself either, not pure research and not production, but somewhere in process development, that sort of area. (The shift identified as an occupational change) I ran a lab (in charge of nine people). Then I was offered a shift manager job over about a hundred men, a very big jump. I saw it as a temporary measure just to get experience in line production. [217, senior technical officer to manager, process development, then shift manager, now manufacturing manager, all in pharmaceuticals]

* Well each significant change has been related, one job's been slightly related to the job before. It's quite a simple career for ten years and I don't regret any changes I've made. (The change from commissioning to maintenance engineering) I was quite contented where I was. . /. . I found out that they would be wanting somebody in this electrical development department and I applied. . /. . got offered a job there at a salary considerably higher than the one I was on. . . /. . . A good move that. Well they all have been. I haven't made very many so I have made them all right. I know I have made very few job applications, always scan the adverts, but you usually convince yourself of a good reason why you needn't bother. [235, commissioning engineer to assistant project engineer to assistant electrical engineer on maintenance]

* (Having commissioned a plant successfully, stayed on in production) That seemed to be rather boring. There was no glamour left, no more interest. After a few years I would have been production supervisor or production manager and then a move on to the next place, where I would have been assistant works manager/works manager and then a job for life, but that wasn't what I was looking for. (Next, he moved to another site still as development engineer.) It was very

interesting, we were given money to spend and we built a miniature factory - all of that was great experience. (It was thought that) someone ought to do some marketing. I started doing a little bit of market research, and then they decided they wanted a salesman and I was very interested. I was attracted by the fact that the sales life was glamorous, it came to a sizeable increase in salary and the company car was appealing. I was made Market Development officer: the one position in my life which in many ways I regret leaving. It was super. I worked for an organisation which recognised my ability, we were given a free rein and I enjoyed working along their lines and getting reward for it. [211, production engineer to sales development engineer to market development officer. Stayed in sales]

* I've moved several times and probably much more than any of my contemporaries. It's a mixture of ambition, frustrated ambitions and bad luck really. Moving to companies where you hope to do something good, events have conspired against you. [242, development chemist, sales executive in three companies, now assistant sales manager, chemicals]

* I tended to go into management because I developed or drifted in that direction. I was never going to be a top class technologist. . /. . I was very lucky that on the particular project I was appointed to, it had run into trouble. . /. . I went in and managed to get the thing going. I don't know whether it was diligence, luck, probably luck, I had a lot of help. We got the project back on its feet so I then took over more, a wider role. . /. . financial matters and contractual matters and I liked it and I guess it grew from there. [221, development engineer to project engineer to assistant project manager to project manager]

* I realised soon after I took my degree that I wasn't a designer. . /. . I think you've got those who are wanting to be designing or developing something, want to get intimately down to the nuts and bolts. . /. . and those people who are not so interested in that and maybe wanting to get more into the organisation, administration, control, liason, in other words, management. . /. . I started off in a

design department, then I moved into major task management, reporting to project management. . /. . (He then moved to another company) It was a good move because I wanted further experience in another company, an electronics company, because I'm a mechanical engineer. . /. . It helped me not only to gain an insight into electronics but also allowed me to move a stage higher in the organisation than if I hadn't moved. [256, design and development engineer to section leader to programme engineer to programme manager to assistant project manager, now project manager]

* My degree was in Chemistry. . /. . It's got progressively further and further removed from any sorts of chemistry whatsoever. . /. . and that is not really by judgement I suppose, but more like luck or circumstances. . . . /. . (After six or seven years) It was very interesting, it was a bit of everything that was a bit of sales, a bit of technical services, a bit of repair of instrumentation, a bit of administration and things like that. That company was very much a family owned company. I wasn't getting anywhere fast enough, although I had certain promises about being involved in the share of the company it never turned out like that. I thought, time for a change. I applied for a particular job and they promptly rang up, saying you don't want to apply for that job, we've got a much better job. [246, research chemist to technical manager to sales engineer]

* (Working in R and D, steel industry) Got a bit narrow. It was interesting. It was only after you'd been there for a while that you realised that the problems of the job were more than the potential satisfaction. You realise that the longer you stay in that job the more pigeonholed you're going to be. It's also a very narrow field in that it's condensing all the time. . /. . lack of any foreseeable future. I wanted to stay in development work because it's not routine or humdrum. (Became project leader in plastics industry, but after another year) I finally got fed up with being called in with half an hour's notice to work nights for the next n weeks. . /. . also I didn't see that there would be any future in the products for the company. I decided too it was time, I'd had enough of development work and I went over to a chemical company. I wanted to go back towards management

services, because I'd always been interested in the industrial engineering side, even when I was at the university, in fact I'd done some management services work when I was training. [201, assistant research engineer to project leader to stores and materials controller, later O and M assistant in local authority]

* I'm more suited to a production type atmosphere. . /. , I was fed up with inspection. This came up and I fancied the job, I fancied another twenty five percent (pay) so I took this one on. I was a bit frustrated on quality control, you see something that goes wrong you can't put it right, you've got to try and force someone else to. . /. . it's a bit awkward that. . /. . That part of it hadn't entered my head really when I applied for it. Before that I was an industrial engineer. My title was senior process engineer, sounds quite a good job. Foreman (on quality control) doesn't sound so good, is actually that little bit higher, and a bit more money as well. [216, industrial engineer to quality control supervisor to production foreman]

* Every job I have been on has been different. It seems like six or seven jobs, although I have been with one firm most of the time. I do regard it as different jobs. . /. . You get no choice, you can obviously state your opinion. But I have worked for one particular director for six or seven years now and so I am one of his people, there is a whole group of them and he moves them around as he thinks fit. Sometimes he can see things that we can't. This director has looked after me well. It has never not been in my interest to go where he wants. [243, assistant engineer, local authority, then site engineer for large contractor working on several separate projects.]

* I got just the right sort of experience there. Working on site is different. . . /. . . you are working for the resident engineer and he lets you get on with your job, so I found that quite good. I was there for three years. My career started to change course I suppose about halfway through that three year term. We had a quantity surveyor working for us and he left and I took over his job as part of my job, just to fill a gap. . /. . they never did appoint someone else. . /. . I suddenly found that I was given a lot more responsibility. . /. .

suddenly felt that I was becoming more important and I decided that was quite a good line to get into. I didn't fancy the idea of doing it to start with, I took it on rather reluctantly. I just decided that I enjoyed doing it. [226, engineer to engineer/quantity surveyor, now cost engineer]

These quotes have been given at length to show how several themes can be picked out as the careers evolve: all these are about finding out what you like and find rewarding. There is still a strong sense of some people moving away from activities they didn't like (see [201] and [211][216]), as well as finding out what is fulfilling for them. Success, as in the case of [221] above, is obviously enjoyable. The experience comes before the decision to carry on in that direction, as in the case of [226].

Three men had experienced more changes than the others in this group, because they had become dissatisfied and moved away from an area to which they subsequently returned. All these were notably ambitious men, who were perhaps rather impatient for achievement. Their experiences further demonstrate the complex ways in which people found out what they wanted to do.

* I wanted to go on to higher things and get a Ph D and that is in fact what I started to do as soon as I finished my Honours degree. . /. . I decided to take this R. A's post. . /. . I started that in the September and as it came into the new year, the more I talked to the Ph Ds the less I wanted to be a Ph D because it frightened me to death the way that they were overqualified for industry. . /. . . They were destined for a life in nowhere but investigation, whether anybody ever read the reports or not was another matter. I was never ever going to be down at the sharp end, I was always going to be categorised as a boffin. Before I knew that much about them (Ph Ds) I felt sure that was what I wanted to do; when I saw how they operated and what they did, I was sure that was what I didn't want, to be shunted into that sort of life. [259, resigned from sponsor, for whom he'd worked since age 16, to become a research assistant in control systems. Returned to subsidiary company as assistant works engineer less than a year later]

* I left there really because I still considered myself a technical man and wanted technical work and you know just didn't like the idea, I mean this place wouldn't have any problems if it didn't have any people, really, and I much prefer to wrestle with the problems of a machine rather than the problems of the people. I wanted to get back into the pure science. (It didn't work out) The pace of life in R and D nearly drove me barmy. It was just much too calm, there was no pressure, it didn't matter if you wasted a few hundred quid this week, try something different next week. Things didn't move quickly enough for me so I heard this place was looking for someone and I just wrote to them and got rid of the other job. [229, works director to R and D project leader to production manager, all ceramics industry]

* They said to me, well what do you want to do, do you wish to continue on the same career lines as you are. And I said yes but I want to get into management. . . /. . and I eventually did get a position. . /. . Now why did I make that decision to go into management, this is quite interesting, in fact if you look around, everybody that's gone up the ladder has the big company cars, has the high salaries, they're all managers. Nobody's stayed on being an engineer, . . /. . they get to a certain stage, they get to the age of about twenty eight, and they can't see any future in being a purist. . /. . so they all opt into management. . /. . That was one of the reasons, it wasn't necessarily because I wanted to be a manager, it's that all the managers have company cars and up to that stage engineers didn't have company cars. . /. . the rewards were better being a manager.

(Once in management) The bit I hated most of all was dealing with people's petty problems that they couldn't solve themselves. . /. . I spent a good seventy percent of my day dealing with union problems. . /. . there was nothing complicated about it at all except I had to start dealing with the blasted unions. And then I started not to enjoy my job. . /. . I left the company, I joined a government job, I thought the grass was greener on the other side of the fence. . /. . I went for the interview and the job sounded very interesting indeed.

Well for the first two months it all went very well. . /. . and I was really enjoying it. . /. . (then) there was the lack of money and they couldn't afford for me to go out. So they said oh your job doesn't exist now, you'll have to do this kind of work, and I said this is not the type of thing I enjoy. They said well that's all we've got for you. . /. . I was so bored, one day I sat down in the office and threw all the papers off the desk, I was stuck in this office. . /. . I found it boring, the I found the people I worked with were boring, I found they had no vitality, no life, no get up and go, they were all staid, they lacked any sense of fun about them. . /. . I wrote to (the old) company. . /. . telephoned them in fact, they took me back immediately. [207, civil engineer to site manager to training officer, back to senior civil engineer]

8.1.3 Later changers

The third group of men had spent some time in their first occupations before changing. All, including [252] and [232] described under section 8.1.1, had made shifts in occupation and of these four had made changes involving retraining courses. In various ways their first occupations had become less satisfactory and they decided how to react to this. Sometimes they had nurtured ideas about changing for a long time, e.g. [232] described in section 6.3.4. These were rather like dreams that they eventually fulfilled, e.g. [264], [269]. There was one exception [241], who was not dissatisfied but responded to opportunities that became available.

* I felt at that stage that I didn't have enough managerial training. . /. . and it was following from that that I decided to go on and do a postgraduate degree course in administrative sciences. . /. . I set off on that with the initial objective of returning back into industry to take on some reasonably responsible roles in R and D. . /. . When I completed that course I did my dissertation. . /. . a stockbroker approached the university looking for people to do some research work for them, and this sounded interesting so I went along to them and we discussed a number of projects and this was one that we came up with. . /. . absolutely fascinating. . /. . I then went

looking round for jobs and found that I was getting far better offers from City firms than I was in engineering. . /. . it was more that I was looking for an engineering job to go back into engineering, but having done this work with the stockbrokers I thought well I'll make some enquiries. . /. . the other funny thing about working for a stockbroker was that by going into the research department it was going to be fascinating work. So eventually I decided to join the stockbroker. . /. . (The electronics company) had guaranteed me a job when I returned from the M. Sc. . . /. . interests had changed. I think I was only then beginning to settle down in an area. . /. . I quite clearly had a direction which I wanted to go in, not too clear about where it was, and that worked its way through to the point of having done that masters degree where suddenly I made a complete change. And really up to that point the whole direction was in a straight line, although it was a funny straight line, but I could see it as a straight line. It all had one area of employment in mind. And then there was that sudden change. . /. . So often things have happened more because rather like computing because I found myself good at it, rather than because of any positive intention . [241, design engineer, electronics to research statistician, stockbrokers, now director of own computer consultancy]

* After meandering all over the place in a variety of jobs. . /. . I was in construction again because it's the only thing I could earn money at. . /. . and winter was coming up, and winter is very very miserable, it really is, it's the most miserable time of the year. . /. . and I wasn't really very happy, and I saw this job advertised, and I went for it with more determination than I've gone at any other job but still not really thinking I had any chance of getting the job. I got it. [203, civil engineer to journalist]

* I had the polytechnic sort of up my sleeve for several years, but the salaries were so low that I just couldn't contemplate changing. . /. . salaries were bumped up considerably. . /. . and made almost comparable to what I was getting in the local authority, and the appointment came in fact in exactly the subject that I wanted to do and so I obviously applied. . /. . I wasn't happy where I was, the job

vacancy occurred just when I wanted it, and so all seemed set fair. . /. . (there was) the clash of personalities that I was working under there, also the fact that I couldn't see any future without moving from that organisation. I mean that organisation covered the whole of the county, so I was going to have to move out of the county which I didn't want to do, and the polytechnic was moving along nicely in the direction that I wanted it to go, so hence the move. . /. . It's just that the circumstances were right at the time, I'd thought about lecturing, I don't really know why, I think it was the way of life, I had two good colleagues that I used to see ona regular basis, and they seemed to be enjoying life (as lecturers) and their lifestyle was quite good, so I thought why not do the same thing. [238, assistant engineer to lecturer, now senior lecturer in civil engineering]

* I noticed they were very management oriented. . /. . I've never been interested in being a manager, I'm only interested in getting on with the job, I can't be bothered with all the aggravation. . /. . they tried to get me to go on management courses. . /. . because I had a qualification (doctorate) they said oh you can't stay working there, we've got big ideas for you. . /. . Yes I did get the feeling that if I stayed there I'd be classed as a failure if I didn't move on from bench chemistry. . /. . I saw this advertised. . /. . I had no trouble getting the position. . /. . because I decided that it would suit me being a technician, with the qualifications I had I can come straight in at the top. . /. . I knew it wouldn't be perfectly suitable because it's such a step down and I wouldn't be completely happy so I thought well it's nearer home. . /. . it was a very safe place to work. . /. . no chance of being made redundant, I've been bitten once there you see, quite secure. [234, research chemist, pharmaceuticals to principal technical officer, polytechnic]

* The organisation was rationalising like mad at that time. . /. . so you'd be involved with the same, you'd probably get there and find it was too late, things had happened. So really it, there was not any scope for continuing. . /. . I suppose it's then I realised that a change might be worth investigating, but when I decided to change I moved very quickly. . /. . Partly just through conversations with

students who were involved in lecturing. . /. . and another thing was, that one of the managers in the next section to me also was lecturer and I sort of gradually talking with all these people and they arranged for me to meet a lecturer. . /. . and I went and spent the day with him. . /. . and it turned out that you didn't of course have to be trained, but. . /. . it was better to be. And the way I thought of it was really rather like secondment. . /. . that, if I did the training then at least I'd see whether I liked it or not because I'd be out doing it. I talked it over with my boss, who also happened to be a personal friend as well, and he said that if it didn't work out, there'd always be a job for me when I came back. So it was, that's what really decided me to do it, that I could leave but almost guaranteed a job if it didn't work out. [204, process metallurgist to teacher training to lecturer in general studies/sociology, now senior lecturer]

* I worked for a while as a hospital porter. . /. . and that's where my interest in social work began, although at that time I was also doing this voluntary work. . /. . and my interest in metallurgy was growing at the time, and then finding it difficult to get a job, my interest in metallurgy started to decline and I felt that this might be an opportunity to review one's personal position in life. What is one doing, is one achieving one's potential and so forth, and I felt that there were other aspects of my personality and potential not being touched on at all and it was being stimulated by the work with people. But at the same time I did obtain a research post. . /. . a yearly contractual type of employment. . /. . I was becoming somewhat disillusioned about the prospects of developing further in metallurgy. . /. . I started to realise that I wasn't doing, or hadn't done, what I wanted to do. It was more what my parents wanted to be or other people wanted me to be or do. This was my own personal decision, and it does reflect to a certain extent the slow rates at which I had reached maturity. . /. . so at that stage I decided I had something else to offer, myself as a person rather than just my brains, and then the switch came when I saw the opportunity of going into social work. [269, research metallurgist to social work training, now senior social worker]

* About five years, I did quite well there, I was doing some very specialised work. . /. . (at the same time) I got involved in ever such a lot of things (voluntary work, crash pads for the homeless etc.). . /. . it rapidly extended. . /. . one of the probation officers commented that I was doing very well and had I ever thought about being a probation officer. . /. . I don't think I had until then. I'd thought generally I'd like to do something involving social science. . /. . I was doing quite well. . /. . and quite enjoying the work, very interesting, I was getting very good money so it was difficult to give that up, but then eventually I realised that I'd never be able to afford to do the training and I just had to do it and struggle through, and once I started applying having written the application, I was then very much aware of why I didn't want to continue. It had reached the point where the daytime was getting in the way of all the other things that I was doing and I thought well if I could end up doing that work full time and getting paid for it, so I applied and got accepted on the course. [264, systems analyst to CQSW course, now probation officer]

8.2 Conclusion

Looking at the detailed story of all the careers it was evident that examples of the various change types, A, B, C and D, occurred in each of the three main progress groups (see TABLE 8.2). In this table the numbers in each cell are too small to draw any other conclusions, except that Personal Change occurred more often by evolution than by sudden early or late changes.

Although many of the changes described were not radical changes of occupation, at least to a dispassionate observer, all the men had shown some degree of flexibility. Some had reacted quickly to dissatisfying early experiences, some had moved gradually in directions that became clearer over time, and some took several years to decide on a suitable occupational career. Some had always had ambitions towards specific occupations that they were able to achieve, e.g. [226], while others entered their particular specialisations almost by accident when

TABLE 8.2 RESPONDENTS INTERVIEWED AT STAGE 2 CLASSIFIED BY PROGRESS GROUPS AND BY THE REVISED TYPOLOGY OF OCCUPATIONAL CHANGE (Chapter 6 Section 8)

Category of first change	Progress Group: Early changers	Evolvers & Returners	Later changers and shifters	Tota
A No choice	-	3	1	4
B1 Chance Opportunity	1	3	-	4
B2 Opportunity and Ambition	-	2	-	3
B3 Time for a change and opportunity	4	1	2	7
B but does not fit B1, B2 or B3 exactly	1	2	1	4
C Mismatch	1	1	3	5
D Personal Change	2	8	1	11
Totals	9	20	9	38

opportunities arose for them, e.g. [241][268].

The accounts of career development contained some common themes, which will be further discussed in Chapter 9. Whatever route they had taken, and whatever type of changes they had made, all but one of the men studied expressed considerable satisfaction with his present (i.e. 1980) job. The exception was the O and M specialist [201], who wanted to move to a more challenging job in the same field, but this was taking some time as he also wanted a specific geographical location. Nevertheless it was later discovered that he did eventually achieve this move.

9. THEMES FROM THE INTERVIEWS.

9.1 Summary.

In this chapter, the men's career progress is examined for common themes that might relate to the study of flexibility and adaptability. These themes were self awareness increasing with experience, the integration of lifestyles with work pressures, and the amount of advance planning involved. Three 'vignettes', or short summaries, of interviews are included to demonstrate some of the categories used in the data analysis.

9.2 Increasing Self Awareness.

First, to see if the nature of the men's satisfaction gave any clues to the flexibility they had shown, their descriptions of their current work were examined. When asked what they liked and disliked most about their present jobs, their answers were extremely varied. There was no pattern of likes and dislikes but the dislikes tended to be trivial, whereas the satisfactions usually referred to challenge, interest and responsibility.

There was evidence of a theme of increasing self awareness. People learned by experience what suited them, e.g.

> * I have found that personalities often matter more than projects. It is not a question of what you are doing, but who you are working with. You can get a lot more satisfaction working with a good team and with rather poor material than working on very good material with rather a poor team. [223, evolving careers group]

> * Prior to that I'd spent quite a lot of my free time working as a voluntary worker for a charity which I myself developed../..I was learning about myself and learning about people, and that motivated

me towards social work in a wider sense. [269, late changer]

* I did very much get the impression (of industry) that it was very rat racey, I saw all these younger newly qualified staff were all racing, working hard, becoming part of the race for promotion and I didn't want any part of that. [215, early changer]

* In the early days I used to get quite overinvolved really and too worried. The thing to do when you've had some business experience is you learn to take the decision and not to fret about it, you also learn not to fret about anything in the business which you can't control.[242, evolver]

(The move from local authority work to contractors) That is where I first really got into site work. I could see that office work wasn't for me and design wasn't for me, so it had to be construction. I don't like being stuck in an office. I am a practical person.../..I would prefer to be in heavy civil engineering, rather than building. I think it probably suits my temperament more, it is big and a bit rough. The main thing is to get it in and get it done, there are more technical problems../..in building it is repetitive and it is the final finish which is of interest. [243, evolver]

* When I went there I used to be called out two or three times a week even though I was in effect the chief engineer.../...things were so bad. The last year I was there I had one call out and that was for something major. That was the transition and I felt good about that. [259, evolver]

9.3 Lifestyles

Another noticeable quality or theme in the present worklives of these men was the degree to which they had integrated their work and home lives. 79% were married, 83% of these with children, and they often referred to the difficulty of discussing the satisfactions of work in isolation from its connections with their lifestyles. It was clear that for some, this

work and homelife integration had not always been unproblematic, but it was an important ingredient of their ambitions. The single and separated minority also held strong views on where and how they wished to live. Lifestyles needed to be worked out. As Evans and Bartoleme (see Chapter 4) described, the pressures of launching a professional career can rebound on the quality of family life and personal relationships. They write of emotional spillover:

> Worries and concerns, satisfactions and joys, linger on in the evenings well after the working day is over. After a bad day at the office, the manager returns home moody and depressed and tries to unwind. After a good day, he comes home excited and happy.

These authors believe that continuous negative emotional spillover damages personal relationships.

It will be remembered that family pressures were also high on the list of reasons for change, (see Chapter 6 section 6.6). These pressures referred to wife's job, children's education and preferences for particular locations, all of which considerations are crucial for the family's lifestyle. Some men spontaneously referred to the tremendous influence their wives had on their lives and personalities.

> I tend to get carried along by the momentum of whatever job I'm working with../..that dedication../..has caused me one or two problems with family life../..as I was given more responsibility I started working longer and longer hours../..I didn't realise what I was doing../..it was my wife that realised what a fool I was being and then I learnt by that../..got a decent promotion out of it. [233, manager, software agency]

> * Finding her was one of the changes in my life../..she sort of pushed me into it (voluntary work with children) and I enjoyed it. She'd seen me with kids of relatives, getting on with them, some people can and some can't and she noticed that I could.[225]

> * It is pressure../..there was no private social life, it was entirely open, it was not the sort of job at which you could relax../.. Quite often we would be entertaining with the baby in the carrycot

under the restaurant table.[211, regional sales manager]

* That I wasn't prepared to do. I think there are greater values in life than taking your kids out every two years and moving them to another place (238, civil engineer, local authority, on the need to move for promotion)

* When I was in industry../..I'd be mulling over problems../..even programming, I'd go home ../..and scribble away. It doesn't suit me. You come to work to work and when you go home you want social life, not to be preoccupied. [234, technician]

* Family and home, to the relatively unambitious, can mean a lot in choosing the where and when you're moving, changing jobs. [232, police constable]

Even the most ambitious men showed a regard for the lifestyles of their families. The sales managers limited their work to exclude distant countries so they would not be abroad too long, and the chief engineer listed the housing perks available with his present company as a definite reason for staying with them.

The nature of ambition, and how it can be integrated with lifestyle, is perhaps best described by [265], a production manager. His views were typical of those of many of the sample.

* It depends how ambitious you are. I'm not particularly ambitious really, I'm not that materialistic, in spite of what you might see../..If anything I just like to have a lot of time to do things that I like to do, outside of the job. That's why I don't want any great pressures, I'm quite happy to carry on doing what I'm doing now because I can get a lot, I'm fortunate in that I can get a lot of satisfaction outside of my job. I don't rely on my job to give me satisfaction in terms of achieving objectives../..If things became unbearable I would move, or if it started to inroad into my domestic life, because I don't think the rewards are great enough anyway in industry, if you're going to work sixteen hours a day in another company you'd just as well work twenty hours a day for yourself. I

hope I don't ever get to that stage where the job gets on top of me and the rest of the family. I'm pretty happy with what I've got now. I don't think I want to go any further../..I think I've tempered my ambition as, as the family's come along../..Some people I think have difficulty in providing for themselves as well as the family, in terms of achieving ambitions or objectives at the expense of the family, I mean emotionally not materially, and I to a certain extent went through the same problem and suddenly realised that the kids were growing up or would grow up and really I was going to miss a hell of a lot. Probably a couple of years ago when I worked long hours, not really long hours but intense hours and just came home absolutely shattered, physically and mentally.

9.4 Planning

To integrate work ambitions and home life as the career progressed had often required a degree of rethinking and reorganisation. But it has already been noted that these accounts of working lives from graduation to present status were not characterised by frequent references to changes as part of plans directed towards specific future objectives. This did happen, but not to everybody. So how was this high degree of satisfaction with the career and lifestyle achieved? At the end of the interview, each person was asked "Looking back on all this, how far ahead do you think you've planned what you've done?"

The results of this were surprising and warranted further examination, (see TABLE 9.1).

The detailed planner said:

* I suppose twenty, I set a target at twenty, I didn't call it a project manager, because I didn't know what a project manager was exactly, but I set my sights at twenty on being in that position by thirty, and in between I tend to set goals every two years; in two years' time I will be moved on to such and such. [22], now the youngest project manager in a large organisation]

TABLE 9.1. ANSWERS TO THE QUESTION "HOW FAR AHEAD DID YOU PLAN?" MADE BY RESPONDENTS INTERVIEWED AT STAGE TWO

Set sights, goals and targets in detail	=	1 person
Background plan, overall intention	=	4 people
Stage by stage, taking opportunities as they arose	=	7 people
Not at all as long as everything went OK	=	3 people
Hit and miss, often changed mind	=	2 people
Partly luck, partly intention	=	5 people
Not really, not at all	=	11 people
Unclassifiable response	=	5 people
TOTAL		38

In the second category, there was an overall intention, or background plan:

> * When I was sixteen years old I had my career mapped out to engineer; I wasn't too sure what an engineer was, but I was sure that was where I was going. Then of course when you start in industrial life as an engineer, a very junior engineer, you are sure that you want to be the chief engineer. You are not too sure how you are going to get there, but it is fair enough to say that you feel as if you want to get to the top in your engineering career. [259, now Chief Engineer]

> * I think almost from leaving university, I had the intention of training at some stage in social work../..I thought within three or four years. But it was delayed by other financial constraints. [264, probation officer]

In the third category, people were clear that they had moved stage by stage:

> * Couple of weeks../..No, I tend very much I think to live each day as it comes and take the opportunities as they arise. [229, production director]

> * Very little actually../..I've always looked in the short term, or fairly short term../.. I'm glad I haven't planned anything really. A lot of it has fallen into place by just keeping my ear to the ground../..just spotting things as you go along../.. There is nothing really interesting if you have a deliberate plan../..no surprise. [223, technologist engineer]

> * Not too far really, I think it's just been a series of sort of happenings. I haven't really thought of a plan and gone out to achieve it, just been like different stages, college, you went to the firms they chose for you etc../..it hasn't been planned , it's just been stage after stage. [262, materials technician]

Some people said they didn't plan at all as long as everything was going satisfactorily for them:

* Well I never thought when I was doing my day release course I didn't ever think I'd do a degree../..when I took a degree I was obviously planning four years ahead because it was a four year course. But I don't worry. As long as everything is going all right I don't worry. [240, chief project engineer]

Not very far ahead really../..so long as I'm doing something that interests me and that stretches me I'm happy, and when it ceases to interest me or stretch me then I'll look for something more. [201, Organisation and Methods officer]

Two people felt their planning was ineffective, but did not mind this:

* I think a lot of the planning that I did was fairly hit and miss when I first started thinking about it, which perhaps was fortunate because it did give me more time to really think about what I was doing. [205, maths teacher for maladjusted children]

* Two months. That is, I'm pretty good at making plans, but I'm also pretty good at changing them the following week, so I could never say that I have had a career path mapped out and gone through following a particular path. Each change, each move that I've made the decision has been forced by a set of circumstances that I didn't like. [233, self employed computer consultant]

Others felt that luck had played as much part in their career paths as planning:

* Not very, about fifty percent, something like that. I very much live on my luck, or live on my feelings , I suppose more than anything else. [246, sales engineer]

* None of it's been planned any further than three months except the last move, because initially I don't think I was capable of planning, didn't really know what planning meant, wasn't able to consult with anybody. I've always uncannily been in the right place at the right time. I could never ever have planned to make some of the upward progressions in my career../..I could never have planned to have moved that quickly. The only plan was in fact to change

direction away from chemistry, but how that plan was put into operation, I hadn't planned how I was going to reach that objective. [265, production manager]

The non-planners were quite clear in their answers:

* I wouldn't have said I'd planned at all. No, I'm very much not a planner. I just get on with my job. I certainly plan my own job as far as what I want to do with the pupils but as far as my own career goes, I don't plan that. [215, technical studies teacher]

* I think the first three years I was working I just lived for, I didn't really plan much ahead. I was just looking forward to getting my civils, I didn't look in the long term. I don't know how much I'm looking in the long term at the present either. [207, senior civil engineer]

* I think you can only look ahead and plan with the information you've got available. If that information is very sketchy and not very firm, then you would be silly to plan ten years ahead, unless you're someone who could change very quickly with changing events, but I don't think I'm that sort of person. [206, shift technologist]

* Once I'd finished and gone into engineering it wasn't so much a plan as an acceptance that that's what I would be doing until retirement but then../..what I'm doing now, none of it, literally. It's a complete change to what I thought then. [252, maths teacher]

9.5 Conclusions

The men in the sample had taken extremely varied routes, both before and after graduation, but they had all (with the one exception) achieved work which they claimed to find satisfying. Early ambitions did not always ensure that a man would enjoy his chosen occupation, e.g.[201] had always wanted to be an engineer, but eventually became dissatisfied with development work. Only one of the teachers and lecturers, [268], had any intentions towards this profession in their early years. Strong ambition

could lead to excursions which proved unsatisfactory, e.g.[259], [207]. Similar movement through various occupations was found in the two drifters, [225] and [210], who had little idea of what they wanted, and could hardly be described as ambitious. Academic success was not a good predictor of early career satisfaction. [210] the drifter, [233] [240] and [243] all had first class degrees.

Careful long term planning was not a prominent component in many careers. Some changes came quite suddenly, others gradually, but it was not the norm for them to have been planned in detail some time beforehand.

Some people took several years work to settle into their careers. As far as can be seen, all of them are at present settled, but as circumstances change they will doubtless be capable of moving to other fields. Those in less secure jobs (e.g.[235] at British Steel) have already given some thought to this possibility.

9.6 Postscript

In discussing this data, various typologies have been used, i.e. the change types (Forced, Opportunity, Mismatch, Value Change) the progress groups (early changers, evolvers, late changers, and subgroups), and the two continua of ambition (definitely high to distinctly low) and extent of change (very slight to drastic, requiring retraining course). It must be emphasised that although these were valuable for arranging the data, there was no such thing as an archetypical case in any category.

To emphasise the individual complexities of each account, while illustrating some of the main categories, three 'vignettes' are given here in full. These summaries were written soon after the interviews were completed, before the complete analysis that looked for themes and categories had been conducted. They concentrate on the uniqueness of each individual, and represent the interviewer's personal opinions as well as the historical facts of the account.

9.6.1 Vignette One, the early changer.

205's family background was manual work in engineering and building. He left school at sixteen. After nine months of a local apprenticeship in light engineering he realised that his wages were well below average, so left to work for the Water Board in the drawing office, where he had a friend. This was better paid and far less physically demanding. When he eventually found that he could do a degree in civil engineering through his part time study, he and his family were surprised but pleased.

As the course came to an end he realised how much he enjoyed university life. "Time to sit down and read a book that you were interested in". He thought teacher traing would enable him to continue this. "I wasn't really happy about the thought of doing civil engineering for some time, and everybody was talking about careers, and joining the Civils Institute to become a professional engineer and it really didn't appeal to me at all. I had an aversion to that sort of thing..even turned some job down".

Six months after graduation he saw "it was either civil engineering or a long time unemployed, which I didn't want". Also his parents were critical, saying he was "wasting his life". He took a job in engineering design: "Quite interesting because you could do a complete job". Soon he moved in with some teachers. London at that time was "fairly advanced really, I mean it was sort of like the frontier in education... lots of new theories, educational theories..it rubs off on you in the end, that sort of enthusiasm and commitment". Teaching became attractive as a job, as well as a means to get time to himself to read and think.

Eventually he resigned from his job. "I decided it's now or never..it's difficult sometimes to make a break, you get into a bit of a rut". After a few weeks he got his first offer of a teaching training place (after two and a half years of applications). He moved to the Midlands for this, where he made many friends, especially through politics, and has stayed in the area. After five years at his first school teaching Maths he "became a bit disillusioned...fairly desperate to get out". A friend had previously moved to a nearby school for maladjusted boys, and when he resigned, 205 was able to replace him. In this less conventional institution he can innovate, and

appears to find great satisfaction in doing so, despite the obvious disadvantages of the job in terms of stressful work environment and long antisocial hours.

There seems to have been a conflict between emerging intellectual interests and a totally non-academic background. Gradually, the conventional youth who felt guilty at leaving his first job despite its moderate conditions has become a radical. His determination to express his own ideas finally won the battle with the opposing desire for a safe, reasonably interesting job.

Type of change: value change

Progress group: early changer

Ambition: average

Extent of change: drastic, needing training course.

9.6.2 Vignette Two: an evolving career.

221 says "at age sixteen I had no other ambition in life but to fly. He gained a pilot's license at seventeen but failed the RAF medical. "I said to hell with it, I'll go to the next best thing, which was aeronautical engineering. I hadn't the slightest idea what aeronautical engineering was". he did, however, have a keen interest in space travel and an UCCA form filled in although "I never really thought I was going to have to go that road".

The polytechnic he chose was convenient for placements with his sponsors and the course was "hard work but enjoyable, something I was beginning to get interested in". He had to complete another year of apprenticeship on graduation. "Everybody said don't stay with the company you did your apprenticeship with, just get out, you're going to become dead wood and your brain'll ossify". But the aerospace industry had just seen Rolls Royce crash and he decided it wasn't a sensible time to move.

"I tended to go into management because I suppose I developed or drifted in that direction. I was never going to be a top class designer".

Besides, the prospects of promotion in that area were remote, and he was far too ambitious to wait. "I didn't know what a project manager was exactly, but I set my sights on being in that position by the age of thirty. He achieved this ambition.

He describes how he succeeded:"Something like a year into my career there was a political bust-up within the group. My present boss was given a new department called project management and I went across with him. He took across the functions I was doing. He's built it since then and getting in on the ground floor I went with it".

Knowing 'the system' is important. "You're not going to get a job (internally) by answering an advert. By the time it's up, the job's probably gone, you need to know what's going on. One of the things about being successful in an organisation that size is you have to know the key people in the key functions. If you are progressing up the tree, you have a godfather, whether he admits it or not..he chooses you. You have no say in it. It's a very unfair system...it's been extremely fair to me."

He describes his first management opportunity: "It was very lucky that the particular project I was appointed to had run into trouble. I went in and managed to get the thing going. I don't know whether it was diligence or luck. I had a lot of help. So I then took over a wider role..and I liked it and I guess it grew from there".

Self analytically he says "I've never at any stage wanted to leave anything behind. I like taking on other things and just carrying the whole lot with me. I've never ever been a master of anything but I've never failed at anything either. I couldn't just take one specific thing and build on it and be the world's greatest; I'd far rather have a wide range of interests and be pretty reasonable at them."

Throughout his career, he has scanned adverts carefully and made regular outside job applications, but none has been able to match his salary and conditions at his age. he is still planning ahead. "There are still at least two levels of management to go, and that probably means fifteen years before I could ever really seriously start affecting the company..seems like a hell of a long time. I'd like to be a bigger fish in a

slightly smaller pond, where I could have influence on the company. I do feel you have to keep in trim on interview technique because that one golden opportunity's going to come along one day". When it does, his driving energy and ambition should make sure he'll make the best of it. One of the most dynamic men in the sample.

Type of change: opportunity (from design to management)

Progress group: evolver

Ambition: definitely high

Extent of change: slight. Common path for engineers, has stayed within one large organisation.

9.6.3 Vignette Three: a late changer.

264: "From a very early age I wanted to be an engineer, electrics particularly. Nobody really questioned it. I did better at Arts. If someone had picked up that I wasn't really talented at science...I was just about bottom of the class. I discovered afterwards that all the others went to Oxbridge or Imperial. I was persuaded that I didn't have university potential so applied to get on an HND. I suspect I failed to get sponsored because they (the firms) were told I was unlikely to get 'A' levels. Surprise, I got three (two Bs and a C)". The Headmaster recommended a new university, where he was accepted to study electrical engineering.

"I didn't do very well at the end of the first year. I went through a bit of a crisis, got very fed up with it, was persuaded to stay on by parents. At the end of the second year, I wanted to change to social sciences, but was advised to complete my course first. I worked pretty hard in the third year, got pretty well up to the top of the group, but started going to psychology, sociology and cybernetics as well. I nearly failed because I just idled through my final year". (They changed the assessment procedures just before Finals). He thinks "the course itself was a bit of a disaster" and says most students lost interest in engineering.

"There was the expectation that I would return to work at S (sponsoring company). I'd also, during the sandwich part, become interested in

computing. I could've tried to do another course in social science, but no chance of a grant. I could've done a postgraduate course in cybernetics, even got them to consider letting me do research on anarchist communes. It was a possibility that I could transfer straight away to the computing part of S, or I could go back to work. The computer section were reluctant to take on people just at that time so I went back to S." He managed to convince them of the value of his computing experience, designed a new system and through this was accepted for training by the computer section, unusual without a specialist computing degree.

But he had also by then become involved in many voluntary activities, starting through a recidivist he had met through a university friend. "It was that largely that got me concerned with the plight of homeless people". He started a 'crash pad' at his house. "I acted as the person taking calls and balancing up the volunteers." Local probation officers suggested he should become one, and this was attractive. However, "I was living with a young lady, supporting her while she was at college. She would then support me while I trained as a probation officer. But we split up, and I was doing quite well, enjoying the work, getting very good money, so it was very difficult to give that up. Eventually I realised that I'd never be able to afford to do the training and I just had to do it and struggle through. Once I started applying I was then very much aware of why I didn't want to continue. The daytime was getting in the way of all the other things I was doing."

Once on the CQSW course he was again actively critical of its running. Also "I had doubts about my abilities, didn't do very well in the academic part." It took several interviews to find a position once he was qualified. Not only did he want to live somewhere attractive, but "I was lacking in confidence, I don't interview well, I hadn't any experience prior to the course of working in an agency."

However, he found a post and has now settled into a life he finds very satisfying in a most beautiful setting. At the time of interview he was looking forward to the birth of his first child.

He is a distinctly shy, diffident person to meet, but the determination that has got him to his chosen path shows through as soon as he relaxes and speaks about his views and interests.

Type of change: opportunity. This shows that self classification by the respondent does not always coincide with the intended use of the categories, as this would seem much more like a Value Change.

Progress group: late changer

Ambition: average

Extent of change: drastic, requiring complete retraining.

10. TOWARDS A MODEL OF CAREER DEVELOPMENT.

10.1 Summary.

The various analyses of the interview data left no doubt that flexibility in the career development process is complex. The intensive collection of qualitative data, as intended, produced rich descriptions of experience, and some themes and pattern models emerged. In this chapter the results of seeking to derive grounded theory from the interviews is discussed, and related to previous theory, to derive a model for further examination at Stage 3.

10.2 Principal findings.

The last three chapters traced the graduates through their early stages and career progress, looking for themes. Most people did not begin to think seriously about their occupational careers until they had distinctly rewarding or definitely unpleasant work experiences. Before this happened they were liable to describe themselves as 'drifting', 'following the herd'. They then moved on through their careers making occupational choices only when these were obviously necessary, such as when a new job was offered, or they felt it was time for advancement. At these times, they could be very shrewd about weighing up the potential benefits of the various alternatives, because they had, through experience, begun to decide what suited them. Some had found talents, or conversely weaknesses, of which they were previously unaware. Few reported any specific long term goals or plans, although by ten years after graduation many did mention that they were beginning to look ahead. The locations of their houses and the education of their children were considered important in choosing jobs.

There is significant confidence shown here in that these graduates undoubtedly expected their qualifications in science and technology to

gain them entry into well paid interesting jobs of high status. The degree of real choice of occupation they had was probably much greater than for non graduates, especially in a time of high employment. They were able to drift along paths that were normal for the academically bright of their social class. Although this may have involved harder earlier decisions for those of working class origin (i.e. in exploring options that were new to family and friends), they may have gained by these earlier experiences of the reality shock of full time work.

The principal findings are summarised as follows:

1. When a person told their story, they spoke of development and evolution, rather than dramatic changes, and this was true irrespective of the categories in which they had placed their changes. It became obvious that change is a normal part of graduate career development. As Van Maanen (1977) stated, "to study careers is to study change".

2. There was less connection than might be expected between early plans and ambitions, if held, and the progress of the actual occupational career. Many people drifted into stable and satisfying work, while some with lifelong ambitions did not find their desired profession congenial once they had entered it.

3. People reported the experience of feeling that they initially drifted into an occupation. Their occupational preferences became more specifically focussed through work experience, especially the period of occupational socialisation.

4. Movement occurred away from disliked occupational features just as much, if not more so than it did towards well liked features.

5. There was an increasing integration between work and lifestyle, and this was highly valued.

6. People often moved between jobs and occupations relying on their current awareness of themselves and their circumstances, as opposed to acting in accordance with long term planning strategies directed towards specific goals.

The predominance of drifting with decisions based on current awareness suggested that the men may have been flexible in their careers because of the absence, or possibly the low importance to them, of long term strategies and goals. If a man was confident of achieving a reasonably well paid interesting job with some responsibility and status fairly quickly after graduation he may not have needed specific long term goals unless he was highly ambitious. The desperately competitive years of striving and consequent neglect of family life characteristic of earlier managerial studies (e.g. Pahl and Pahl, 1971) may not have been necessary for the 1970s science graduate. It was not particularly stressful for his career to evolve and change, because at any one time when decisions were necessary he was likely to have had several attractive alternatives. This is not to say that the actual time of decision may not have been stressful. It does mean that most of the men were not risking much as they moved between professional jobs in their first ten years after graduation. They learned the promotional paths available within their organisations, and then either responded to these in the appropriate terms or moved away towards more congenial conditions. They did want to advance in their careers, but it was not necessarily the overriding principle in their lives.

To oversimplify, their occupational drifting was not purely passive, as it had often been during their teenage years. It was in some senses passive, but observant of self and circumstances, especially after the first shock of occupational socialisation, and becoming more alert to these over time. This observance was not at the forefront of their everyday concerns, but was capable of being mobilised efficiently when decisions needed to be made about jobs.

10.3 How far can their views and experiences be explained by existing theories?

This was the fourth research question set in Chapter 1. Some progress has been made towards answering research questions 1-3 (see Chapters 6, 7 and 8). To answer research question 4, the theories and pattern models that had emerged from the methods of searching for grounded theory must be

compared with the previous evidence relevant to occupational change and flexibility, as delineated in Chapters 2, 3 and 4.

In one sense, the modifications to the change typology, as described in Chapter 6,Section 8, demonstrated that some of the previous change research had a useful contribution to make to explaining people's views and experiences of flexibility.

Some change studies had suggested that people were aiming for self actualisation as they move away from either unsuitable early choices made under various constraints, or from jobs that have ceased to be fulfilling although they once were. Some men in this study did report doing these things. These previous studies differed from the actual accounts obtained in this research, in that they did not include moves towards better opportunities where there was no dissatisfaction, so this gave a less complete picture of flexibility. Careers developed satisfactorily from moves made away from specific conditions, but also from moves made towards better conditions with no specific previous discontent.

But how did the more formal theories and models of occupational choice and career development fare in relation to the data? The importance of occupational socialisation has already been discussed (see Chapter 7). The integration of work and homelife, although valued, appeared to have been slightly less problematic than in Evans and Bartoleme's work, but it is appreciated that they focussed more specifically on this area. They also interviewed the wives of their managers to obtain their opinions. The Sample One graduates were not willing to disrupt their lives for work opportunities as much as managers described by Pahl and Pahl, or some of those studied by Evans and Bartoleme.

Occupational choice theories were less valuable, in that they did not describe or explain the reports adequately. Changes did not feel to their participants as though they involved stages in implementing the occupational self concept and finding the ideal career.

Differentialist theories of occupational choice received no particular support from the research data. (Since no closed ended psychometric inventories were used, the objective and specific mismatching of persons

and jobs was not investigated.) Although some individuals did claim that certain aspects of their work suited them because they had a particular type of personality, this was not a strong theme in their accounts. rather than being a "fixed" trait.

According to Super's developmental stage theory, as a man chooses his first job and then continues in his career he is attempting to implement his occupational self concept. He will do this in various ways according to the age related stage which he has reached. The men in the current study graduated when they were between twenty one and twenty eight years old, with a mean and a modal age of twenty three, and they were interviewed ten years later. On graduation, according to Super, some should have been specifying their choices in the Transition substage of the Exploration stage, if they were between the ages of eighteen and twenty one approximately. This was true for all graduates, as they obviously had to take jobs on leaving higher education. However, those committed to their sponsors had little or no choice to make at this time. Next, they should have entered the Trial substage of exploration, involving the implementation of choice at ages approximately twenty two to twenty four. By twenty five or so they should have been in the Establishment stage, where, having found an appropriate field, effort is put forth to make a permanent place in it. The Trial and Stabilisation substage of Establishment, from ages twenty five to thirty, allows that the first field of work chosen may be unsatisfactory, resulting in one or two changes.

These all seem reasonably appropriate descriptions of the behaviours studied, if some allowance is made for the late age at which some men took their degrees. However no distinct differences between stages or phases were reported. Careers had evolved continuously, rather than passing from stage to stage.

When the more detailed behaviours that Super prescribes as characteristic of each stage are examined the data departs further from the theory. The men showed several of the career coping behaviours described in full in Chapter 2. Many appeared to have drifted and floundered; some showed elements of trial and instrumentation, and all appeared to be stabilising by the time of interview. Many showed several

of these strategies over ten years. However, all of the coping behaviours were effective in achieving stabilisation. Drifting and floundering were common and did not have any negative connotations. They provided learning experiences that were valuable. The value judgements inherent in denigrating these two behaviours derive from the one life one career imperative, and they make the theory less appropriate to modern British graduate career development.

Further, the central idea of implementing the occupational self concept carries a strong implication that people do have clear cut ideas which constitute this area of their whole self concept, and which they will therefore be able to follow up and act upon. They are described as seeking to implement this 'template' of the ideal occupational self concept. Taken to extremes this becomes equivalent to the differentialist view of seeking the ideal answer to suit one's talents, interests and abilities. There was no evidence in the data to suggest that anyone believed there was any ideal occupational career to suit them, or that they had looked for such a career.

Super's ideas have been modified to allow the occupational self concept to change and develop as the career progresses, but they still seem to describe a more positive, active and seeking type of behaviour than was recalled by the majority of the respondents in this study. The findings of the present research are tangential, rather than opposed to, to the generally accepted theory.

The work of Schein (1978) offered a solution, a way in which the themes and models arising from the data could be at least partially reconciled with Super's developmental theory of occupational choice. Schein found that:

> One might see little consistency in the actual job histories, but there was a great deal of consistency in the reasons given for decisions. Furthermore, the reasons became more clear cut, articulate and consistent with accumulated job experience.

He explained his idea of a career anchor as:

> That concern or value that the person will not give up, if a choice has to be made....a growing area of stability within the person,

without implying that the person ceases to change or grow. It emphasizes the interaction among abilities, motives and values.

This model seemed to provide the skeleton of a framework that could explain the project findings more fully than the idea of implementing the ocupational self concept. It was getting closer to how people might discover an occupational self concept, rather than having a mysterious vision of what they wanted and seeking to achieve this vision.

Schein supported his model with two other unpublished studies (Schein, 1978 Chapter 10 page 127). He considered that there were five distinct career anchors in his samples, and that more might be found using less homogenous groups, in terms of occupations followed. These five anchors were technical functional competence, managerial competence, security, autonomy, and creativity (entrepreneurial). The others he assumed to exist were basic identity; service to others; power, influence and control; and variety. Some of these were certainly found in the research sample, e.g. Technical functional competence [207], [234], Managerial competence [221], [229].

Schein considered that any career anchor had three components:

1. Self perceived TALENTS AND ABILITIES (based on actual successes in a variety of work settings).

2. Self perceived MOTIVES AND NEEDS (based on opportunities for self tests and self diagnosis in real situations and on feedback from others).

3. Self perceived ATTITUDES AND VALUES (based on actual encounters between self and the norms and values of the employing organization and work setting).

The problem with this is that these concepts are rather difficult to separate when looking at individual cases. We cannot say that a man needs to be a manager, in the way that he needs regular food. We can say that he enjoys exercising the skills associated with such a role, that he is recognised as being successful at this by his employers, that he wants

very much to continue to work in this type of function, and that he has taken extra courses to facilitate this aim. He is likely to hold values and attitudes in common with other managers in similar organisations. The career anchor model suggests that if all these events happen, he is anchored, but does not make it any easier to discriminate between the influences exerted by the events.

In the present sample, success was found to be rewarding and motivating, and the men were proud of their self perceived talents and abilities. It often took longer for them to diagnose their motives and needs accurately, possibly because these are in fact more fluid and flexible than the abilities that had been nurtured by their specialised education. There were not many clear cut cases where attitudes and values had clashed directly with those of the employer, but there were some. [211] left his high pressure sales job because he began to feel it was unethical, [205] felt restricted by the values of his comprehensive school, and [225] was disillusioned with the values of employers in production engineering. Values concerning lifestyles were more prominent than such direct clashes with organisational values.

10.4 Implications: research question 5.

The original aims of the project, at least in part, were to investigate flexibility in careers, from the point of view of being useful, perhaps via learning how to recognise and encourage it. How does the model based on career anchors relate to these aims?

If the model were found to be generally applicable to the early stages of careers, how might it be useful? There are several possible implications for its use in the careers guidance of adults who have asked for help because they are trying to evaluate their career progress. In general, people can be reassured that flexibility and adaptability in careers are not only possible but quite usual, and frequently beneficial to the individual concerned.

The distinct types of anchor described by Schein would be of limited use in counselling, although they could be presented as illustrations of

anchors that others have found. The three components might be more useful for probing about self perceived skills, motives and values. People could be encouraged towards considering possible further investigations of these three areas and how they interact. In summary:

1. Knowing more about how flexibility is both achieved and perceived should help counsel those who find it threatening and unfamiliar.

2. The importance of integrating work and home lifestyles, often neglected in the early years, should be emphasized.

3. Being aware of opportunities should be recommended as a useful ability, so that long term planning is less emphasized; it may not suit everyone, and may become less appropriate for anyone as technology advances.

4. Redundant people may be reassured if they feel excessively guilty about 'wrong' decisions they have made in the past. This should both raise self esteem and emphasize the need to take circumstances into account, both in construing the past and when anticipating possible work futures.

5. People would be alerted to the value of learning on the job as an integral part of career development, rather than trying to 'know' in advance and then being mistaken. They could be reassured that they can develop their careers through experience as well as planning; they can move around to gain this experience and remain flexible.

10.5 Conclusions

Overall the theory or model of a career anchor being found by graduate professionals after ten years work does fit the sample far better than any other theoretical base. Its essentials are encapsulated in Schein's phrase:

> One cannot know until one encounters a variety of real life situations how one's abilities, motives and values will in fact interact and will fit the career options available.

The actual distinct types of anchor proposed were of less value. Although technical-functional and managerially anchored careers were

found, this was surely a case of a new name for something that was obvious to these men and to anyone observing them. The three components do appear to apply, but the evidence is patchy. This is probably a consequence of unstructured interviewing, where it will not suit all types of personalities to discuss self diagnosis. Some people may have seen their careers from the perspective of their skills and abilities, or of their needs and motives or of their values and attitudes, rather than viewing all three as an integrated whole. Some were inexperienced at discussing their work lives at all, e.g. "I never really sat down and thought about it in detail".

Schein's model of the career anchor does help to explain the accounts of the experience of occupational drift with a gradually increasing awareness of circumstances. The men were flexible in their approach to job selection because they did not usually start from fixed and specific occupational goals. Neither were they necessarily seeking to find such goals. Nevertheless, by becoming more aware of their own abilities, motives and values, and the potential of these in combination with occupational circumstances and opportunities, they eventually discovered a core of occupational activities that can appropriately be called a career anchor. Working was a continuous learning experience for the men, rather than a series of stages in a quest for an ideal career. The end result of this process, the anchor, may be the occupational self concept of developmental theory under another name, or at least a close relation to it.

11. EXPLORING CAREER ANCHORS: SOME EMPIRICAL TESTS (STAGE 3).

11.1 Summary

The final stage (stage 3) of the research project explored, in more depth, the career anchor model of occupational flexibility that was introduced in Chapter 10. Chapter 11 describes how data from a second sub-sample of British graduates in the UMS study were used to test preliminary hypotheses derived from the concept of career anchor.

11.1.1 Note

The raw data on which this chapter is based were supplied by a second research group at the Open University working independently of the present author on Decision Analysis and Occupational Change. The hypotheses and analyses presented here originate in this thesis and were not part of the work of this second group.

11.2 The first steps towards testing a career anchor model of occupational change.

When starting from a model that attempts to represent a process by condensing a rich variety of individual experiences, it is difficult to move to the derivation of testable hypotheses. The precision required for basic quantification into rigid categories results in a loss of differentiation in explanation: an individual may feel that the resulting theoretical predictions apply to people in general fairly well, but that they don't exactly fit her unique circumstances. Nevertheless a model that can be described precisely can be communicated to more people, and may be applicable to more helping situations. (For example, use of a simplifying model may mean that the labour intensive, one to one interview with a skilled counsellor can be supplemented by preliminary work with less

trained personnel, or even a computer). On these grounds, as well as a (more general) search for theory, it was considered worthwhile to try to cast those parts of the career anchors model that are open to simplification in the form of testable predictions about graduate career behaviour. Whilst this research cannot be treated as rigorous testing of clearly defined hypotheses, it does attempt the first step towards a test of the model of career anchors.

11.3 Generalising beyond the sample of male engineering and science graduates.

Since the model was developed from an intensive study of a small number of men at a particular time and within a particular culture, under specific economic conditions, at this stage it can only be claimed to provide a plausible explanation for their behaviour. Any further generalisation must be to some extent speculative. But the model was conceived as potentially generalisable to the experiences of other graduates in other subjects at a similar time: there is nothing intrinsically special about science, engineering and technology degrees that would suggest that other graduates in other subjects would not follow similar pathways towards finding a career. It is also possible that the model might apply at least partially to non-graduates, or to graduates in different cultures and economic climates. The most crucial requirement for generalisability is that it should be applied to cases where there is a perceived choice between attractive alternatives early in the work career. If circumstances are severely constrained, then choice is restricted and so is the range of learning experiences available through work. If people cannot move away from disagreeable activities they must adjust to them; and their formation of career anchors, if it occurred, would in all probability be different.

The most difficult area in which to predict the model's applicability is in women's careers. There is considerable evidence from Kelsall's work (1972) that women graduates have both lower expectations and less variety of achievement than men. We do not know whether their approaches or

experiences in relation to career progress will be compatible. If they intend to give up full time employment permanently when they have children, their work lives are likely to be coloured by this expectation. The career woman who either has no children or who returns to work while they are still young has to cope with the additional burden of society's opinions of her role as a worker. Although we cannot assume that the model will apply to all or some women, as there were none in the interview sample, women were included at Stage 3.

The Stage 3 sample consisted of men and women who had studied a wide range of main subjects for their first degrees. This provided an opportunity to make the first move towards generalisability.

11.4 Variables central to a model of career anchors and their relation to flexibility.

In looking for parts of the career anchor model that could be transformed into operationalisable variables, some areas were more promising than others. The idea that flexibility in occupational change is possible because decisions at the time of change revolve around a stable career anchor serves to focus attention on the constituents of such an anchor. According to Schein's original formulation (Chapter 10 Section 3) a career anchor consisted of three components, all self perceived. These components were talents and abilities, motives and needs, and attitudes and values. The common themes arising from the interview data at Stage 2 (Chapter 9) suggested that it was not essential to make distinctions between these three components. If a person perceives that using a particular skill or ability, or recognising a strong motivation or need, are important to them, they can be said to value that quality. All three components of an anchor can therefore be subsumed under values. An anchor thus becomes a core set of values relating to career concerns. No two people will necessarily have identical sets of values, even if their career patterns in terms of jobs taken appear similar to an outside observer.

At graduation most people have some idea what type of work they want at that point, but this will be revised over the next dozen years. The career anchor model assumes that people learn gradually about their career related values. Presumably everyone has some such values at any one time, but how much do they change? Is there a constant core of values that the person always retains? Does the relative importance of each value vary over time? Are all or any of the values that are retained gradually elaborated, giving in effect a more complete set, or do people reject some values, or condense some, ending up with a smaller set of values, or at least a simpler set?

The development of a career anchor takes place over a number of years. The model developed from the case work interviews predicts that people gradually learn what features of work are the most important to them. The interview data showed that individuals differed in the time they took to find their career anchors. In terms of progress (Chapter 8) the 'early changers' group found theirs before the 'evolvers' and 'returners', who in turn found their anchors before the 'late changers' and 'shifters'. Everyone had found an anchor by the time of interview, but it cannot be assumed that all graduates will achieve this (although Schein appears to have made this assumption). Differentiation between a person who has discovered their career anchor and one who has not is a prerequisite for any further investigation of the constituents of anchors. However such a distinction is likely to be problematic because anchor formation and discovery are essentially conceptualised as gradual processes rather than as incidents. Awareness of an anchor occurs over time.

The areas central to the model are therefore whether or not a person has found their career anchor, the constituents of this anchor in terms of a set of values, and the differences between this set of values and the values that were held by the same person at an earlier time, particularly at the time of graduation. Detailed raw data on the career related values held by graduates at various times of decision were available from a study of career decision analysis carried out by other Open University researchers (Cullen and Thomas, in press). Before describing how this data was analysed, an account of this project is given in Section 11.5.

11.5 An outline of the Open University project on Decision Analysis and Occupational Change.

An Open University research project on decision analysis and occupational change (Cullen and Thomas, in press) began in 1981, and this eventually provided the raw data used for stage 3 of the present research. Cullen and Thomas were given access to all the 1977 data gathered by the UMS survey (see Chapter 4), which the original researchers had been unable to analyse fully, due to organizational changes in the Civil Service. The project was known as the Early Careers of British Graduates study (ECBGS), and its objectives were:

> To identify and describe the attitudes and belief systems underlying the career patterns of a sample of British graduates...(and)...to construct a framework of parameters for the systematic identification of career patterns and the construction of theoretical models at a later date. (Interim Internal Report, 1982)

The first stage, once the data was extracted from the UMS system and reformulated, was to examine it for evidence of career planning strategies. Cullen and Thomas classified main degree subjects as vocational or non-vocational, which enabled them to draw up a provisional typology of career patterns "according to the degree to which the original degree subject had or had not been used as a vocational basis for career developments, and the extent to which the individual had remained 'locked in' to his or her initial career choice". This typology is shown in TABLE 11.1. The vocational subjects were medicine, engineering, surveying, agriculture, business, accountancy, law, architecture/town planning and education. The information on career patterns was from details of the first jobs the graduates held and the jobs they subsequently held in 1977.

The relationships between stated aspirations, values and career decisions were also explored. The UMS survey had asked about career aspirations on entering degree courses and on graduation. 41% of graduates had no specific job aspirations until they started work, while only 24% had aspirations that remained the same throughout their first degree and into their first job. The remaining 34% had changed the nature of their aspirations during their higher education (Cullen and Thomas, 1982).

There was a clear statistically significant correlation between aspiration level (i.e. the consistency of aspirations over time) and degree subject, so that those who took the subjects classified as vocational (see earlier list) "will, in the majority of cases, have started out with a clear career in mind, will have held that career on graduating and will have realised their aspiration when they gain their first employment position". This finding supported the researchers' definition of vocational, although "another significant trend" was that 92% of those in Career Type 4 (non-vocational fixed graduates) who continued to pursue their degree subjects, were pure scientists. Cullen and Thomas suggested that these scientists were less equipped to adapt their aspirations to the employment world than other non-vocational graduates, but it can be argued more parsimoniously that these scientists belong in the vocational category. (This would also correspond with the classification of science and engineering degrees as vocational used in stage 1 of the present project.)

The values underlying a given set of aspirations were not known; however there was some information on the respondents' reasons for choosing and leaving their first and last jobs. Cullen and Thomas found that "by considering the reasons given for choosing and leaving jobs, and analysing the persistence and decomposition of these factors over time, it was possible to gain some idea of the type of values which broadly could be expected to emerge as the project progressed". Their analysis revealed that reasons for choice associated with 'career-building' - finance, career development- were correlated with compatible reasons for leaving - better job and promotion; and those reasons for choice asociated with 'opting out' were likewise associated with compatible reasons for leaving, e.g. 'personal' and 'fed up'.

To relate these findings to the present project, these value changes shown by the graduates can be likened to the beginnings of career anchors. Values changed, but they did not do so at random. The values displayed showed a consistency over time. Knowing their reasons for choosing their first job made it easier to predict their reasons for future job changes. The original core set of values was not normally transformed beyond recognition.

Cullen and Thomas selected a subsample of the graduates for a postal survey. First, people who were working abroad, or whose addresses were not available, were excluded, as well as a small group who had given 'various' reasons for choosing their last job, who were thought to be atypical in career pattern. This reduced the sample to 2187 graduates. Discriminant analysis was used to select most typical cases of each career type proposed in TABLE 11.1. The variables used were aspiration level and type, age, total number of jobs so far, and reasons for choosing and leaving jobs. Where there were too many cases in one type, random selection was used to reduce the final sample to 445 cases. A further 77 individuals were also included in the postal survey because they represented divergent and unusual cases of particular interest to the researchers. A response rate of 41% was obtained from these 522 cases.

The aims of the postal survey were "to identify the main values, attributes and expectations associated with career decision making, to consider how they developed through career progression and to assess how they became modified". To this end, three main types of information were collected:

(1) further details of employment history, to update this from 1977;

(2) a self assessment of the style in which career decisions were made;

(3) whether a planned career strategy had been used, and if so when this was first seriously considered.

As a result of the survey the career typology was modified in response to the updated employment histories. Twenty categories could be differentiated, which fell into seven main groups (see TABLE 11.2).

Major reasons for job change, or decision styles, were used by the respondents in the proportions shown in TABLE 11.3. The Externally Motivated and the Plan Motivated styles were the dominant responses. A person's classification on this variable represents both the consistency of their behaviour and their predominant style when moving between jobs - it is an organising dimension in their work lives. TABLE 11.3 shows that only 10.2% of the sample had to be allocated to the multi-dimensional

category, because they had no predominant decision style.

Cullen and Thomas's postal survey showed that most graduates were well established in their fields of work by 1982, twelve years after graduation. 67% answered that they had begun to plan ahead for their current career at least four years before. However the second stage of the project showed how complex a notion the idea of career planning was. A cluster analysis suggested a new typology to represent career behaviour (see TABLE 11.4).

The third phase of the project was designed to explore, using multi attribute utility decision analysis, how the attitudes, values and needs of graduates at the outset of their careers became translated into career choices. Briefly, multi attribute utility decision analysis is based on a type of behavioural decision theory. Behavioural decision theories assume "a model of the person as purposive, capable of reasoning and active in his world in a way which furthers his goals" (Thomas, 1984). In multi attribute decision analysis theory, it is postulated that when a person has to choose between alternatives they will choose that option that is likely to lead to the most favourable outcomes. Analysis of decisions therefore assumes that individuals make decisions between their possible options in terms of the perceived attributes of each option and the probability (expectation) that these attributes would be realised. This expectancy-value approach required detailed information about the subjects' idiosyncratic perceptions of job attributes used to decide between options at several points during the career. The detail was achieved via interviews where the respondents were asked to recollect their past decisions and examine them, by means of an interactive computer programme designed to open up for the participant the process of his or her own decision making.

Details of the programmes used (MAUD and SELSTRA) can be found in Cullen and Thomas (1986), Humphreys and McFadden (1980), Humphreys and Wooler (1981) and Wooler (1984). Both programmes are based on a linear additive model which has been demonstrated as very robust (Dawes, 1979). The validity of such models raises difficult issues: they have face validity in that they are subjectively 'helpful' as decision aids. Their validity as models of mental processes is inevitably more problematic.

TABLE 11.1 PROVISIONAL TYPOLOGY OF CAREER PATTERNS IDENTIFIED BY CULLEN & THOMAS (Adapted from 1982 Interim Internal Report).

Career Type	Brief description	N	% Sample
Unidentified	Unemployed, missing data, etc.	710	11.2
Vocational Fixed	Vocational subject; first job in same field, remain in field	1022	16.2
Vocational-mobile	Vocational subject, first job in same field, changed field	318	5.0
Non-vocational fixed	Non-vocational subject - first job in related field as subject - remain in field	208	3.3
Flexible	Non-vocational subject, different field; remain in field	2655	42.0
Drifters	Different fields; change jobs	835	13.2
Deviants	Vocational subject - not used in first job	575	9.1
	Total:	6323	

TABLE 11.2 CULLEN & THOMAS' MODIFICATIONS TO THEIR PROVISIONAL TYPOLOGY OF CAREER PATTERNS AFTER THEIR POSTAL SURVEY (adapted from Internal Report)

Career Type	Brief description	N	% Sample
Fixed Vocational	Degree and job history coincide closely	86	36
Applied Vocational	Career field rooted in degree to some extent	21	9
Vocational Deviant	Career path not typical of degree. Some have returned to typical jobs after deviating	37	16
Late Vocational	Non-vocational degree but steady career in one field	30	13
Non-Vocational Stable	Non-vocational degree, career has now stabilised	37	16
Drifters	Have tried at least 3 job fields	21	(9
		11	(
Miscellaneous	Non-careerist, no defined path, e.g. housewife, eternal student	4	(2
	Total:	236	

TABLE 11.3 TYPOLOGY OF PREDOMINANT CAREER DECISION STYLES USED BY CULLEN AND THOMAS (from 1982 Internal Report)

Predominant Decision Style	N	% Sample
Multi-dimensional (no consistency)	24	10.2
Externally motivated	78	33.1
Domestic motivated	9	3.8
Plan motivated	94	39.8
Scanning opportunities	20	8.5
Responsive to chance events	7	2.9
Responsive out of desperation	4	1.7
Total:	236	

TABLE 11.4 TYPOLOGY OF GRADUATE CAREER BEHAVIOUR DERIVED BY CLUSTER ANALYSIS OF POSTAL SURVEY DATA BY CULLEN & THOMAS (Adapted from Internal Report)

Description	N	% Sample
Career locked	113	47.8
Evaluative	24	10.1
Careful Opportunists	59	25.0
Consolidating	7	2.9
Flexible Careerists	20	8.4
Domestic Locked	9	3.8
Erratics	4	3.5
Total:	236	

Maud and Selstra were designed as decision aids for use in counselling sessions and this second point is therefore less crucial. There is at present no evidence on reliability when such programmes are used to study how individuals decompose and assign values to a series of reconstructed and/or hypothetical decisions: it has been assumed here that observed commonalities in attribute structures and importance weightings across decisions considered by a single individual on a single occasion are of theoretical value. There is no evidence on the reliability of such reconstructions over time.

Crucial features of the ECBGS data for the present study are that:

(i) Career decisions taken at between one and five points in the graduates' history were explored in depth. Decision points were selected by asking respondents to start with "the time when you first seriously began to consider a number of career alternatives". Then the interview went on to ask them to consider "each significant change point" during their career history, defined as "those which involved a definite change in your employment circumstances". Therefore if a graduate had made no significant changes, only the one initial decision point would have been explored.

(ii) At each decision point explored, all the job options considered at that time were recorded and evaluated.

(iii) The perceived attributes that had been used to evaluate and choose between the job options at each decision point were elicited from the respondents. In the MAUD programme, the generation of these attributes was completely open-ended, whereas with SELSTRA the respondent was invited to elaborate on a few basic general possibilities that the programme supplied as cues. In each case therefore the attributes were provided and named idiosyncratically by each respondent. The importance weighting of each attribute was rated by the respondent on a ten point scale to indicate its importance at each decision time under consideration.

11.6 Operationalisation.

In section 11.4 the areas proposed as central or crucial to the model of career anchor were:

(i) whether or not a person has found their career anchor.
(ii) the constituents of the anchor, in terms of a set of values.
(iii) the differences between the anchored set of values present at the second decision and the values held by the same respondent before they found their anchor. In other words, it was of interest to see whether the two sets contained different values, whether there were more values or fewer values, and whether the same values were given different importance weightings at different times.

To operationalise these three areas in terms of "variables" for examining aspects of the model, each one in turn was considered in more detail in relation to Cullen and Thomas's ECGBS data (described in Section 11.5), which provided an ideal source of detailed information on how career decisions were recalled by a graduate sample who had many similarities to the sample used in Stage 2 of the present research project. The main differences between the two samples were that Cullen and Thomas's ECBGS sample included women and that a wider range of main first degree subjects had been studied by their graduates.

The examination of preliminary hypotheses about the career anchors model was based on the following raw data that were available from Cullen and Thomas's multi- attribute decision analysis interviews for 82 respondents:

(i) The job attributes used by each of the respondents at each of their decision points. These attributes had been recoded by Cullen and Thomas so that those that obviously meant the same were placed in a single category and renamed. There were a total of forty-five attributes.

(ii) The importance weightings for each job attribute at each decision point explored, on a 10 point scale from 0=not used, not important at all, to 9=very important at this time.

(iii) The number of decision points examined during each interview, and their dates.

(iv) The career type of each respondent (as in TABLE 11.2).

(v) The predominant decision style of each respondent (as in TABLE 11.3). N.B. In the cases of (iv) and (v), the respondents were shown the researchers' typologies, and asked if they agreed that their career type was as it had been classified from the postal survey.

(vi) Background variables: the age, sex, class and main first degree subject of the respondents.

11.6.1 Existence of career anchors.

The first crucial variable to be operationalised was whether or not a person had found their career anchor. In the case studies at Stage 2 in the present research, all the respondents had found their career anchors by the time of the interviews, when they had all been working for at least ten years. No inference was made that all scientists and engineers would have found their anchors over such a period, let alone that all graduates would have done so. In Cullen and Thomas's work it was found that a small number of people (11% of TABLE 11.2) showed no stability of career pattern, and that others (10.2% of TABLE 11.3) showed no consistency in how they made decisions about job changes.

To return to Schein's original ideas (see Chapter 4 Section 3, Chapter 10 Section 3), an anchor was only discovered when a person had to make a choice and found that whatever alternatives they contemplated, the same considerations were present. They found that they knew what they would not give up, or in other words they knew what they valued most in their work. "The reasons [for choosing between jobs] became more clear cut, articulate and consistent" (Schein, 1978).

Ideally, to be sure of identifying when a career anchor has been discovered, it would be necessary to monitor a person's career related values several times during the first ten or twelve years after graduation, to observe when a set of values is transformed into a stable

core. In this sample the definition of the first decision time explored by Cullen and Thomas (see Section 11.5) was "when you first seriously began to consider...", so for the subsequent analysis this decision was assumed to have taken place before the formation of a career anchor. It was named the Preanchored Decision.

The graduates interviewed had agreed with Cullen and Thomas's classifications of their career types (as TABLE 11.2). It was therefore assumed that all except those in the categories 'Drifting' or 'Suspended' could be defined as having found their career anchors by the time of the latest decision that was examined, if more than one decision time had been explored. Of the 82 respondents in Cullen and Thomas's sample, 64 had explored more than one of their decision times. Of these 64, 8 belonged to the 'Drifting' or 'Suspended' career types and so were excluded from the sample, leaving a final total of 56 cases for Stage 3 of the present research, all of whom had used the career decision programmes to examine both their first preanchored decision and a later anchored one.

11.6.2 The constituents of a career anchor.

The second central consideration was the constituents of a career anchor. The job attributes elicited by the multi attribute career decision analysis programmes were provided by the respondents in response to the job options considered. They were attributes that were valued at that time (Valued Attributes, abbreviated to VAs). Here these Valued Attributes have been treated as the constituents of a career anchor, so that a set of attributes used at any one decision time was exactly equivalent to a set of values, thus the term VAs covers both attributes and values, as in Schein's work (discussed in Section 11.4). The complete list of Valued Attributes elicited appears as TABLE 11.5.

In some parts of the subsequent analysis, VAs were recategorised in terms of Core Values (CVs), to reduce the degree of idiosyncracy in their terminology, and to bring the work more into line with conventional psychological definitions of values as criteria for judgement of worth, individual concepts of what is desirable, and guiding principles. According to Rokeach (1973):

TABLE 11.5 VALUED ATTRIBUTES ELICITED FROM GRADUATES AS SIGNIFICANT FACTORS IN THEIR CAREER DECISIONS, AS PART OF CULLEN & THOMAS' RESEARCH (From Internal Report).

ATTRIBUTE	DESCRIPTION/CONSIDERATIONS
Fits domestic needs	Family constraints - children etc.
Locationally constrained	Committed to a specific location
Training constraints	Qualification-specific; duration of training etc.
Family constraints	Family business commitments: pressure; loyalties
Chance factors	'Out of the blue' consideration
Outdoors - indoors	Officebound/rural-minded
Practical - abstract	
People orientated - 'thing' orientated	As in 'contact with people'
Theoretical - applied	
Socially aware - unaware	As in 'mindful of social needs'
Politically radical - conservative	Careers that can actually change things
Scientific - non scientific	
Committed to a cause - uncommitted	In this case a 'cause' does not have to be political it could be a product; idea; vocation.
Control over decisions - no control	
High status - low status	
Autonomy - order following	
Intellectual - non intellectual	
Varied - monotonous	
Reputable - unrecognised	In the sense of potential to build a reputation
Potential for experience - no potential	
Use degree	
Job satisfaction	A generally non-specific feeling of well-being
Flexible lifestyle - routine lifestyle	
At centre of things - isolated	
Good social life - poor	
Demanding - undemanding	- in the sense of time and attention-consuming.
Develop personality - stay same	
Individualism - collectivism	Being unattached/attached to a company form
Challenging - unchallenging	
Disciplined - undisciplined	
Interesting - boring	
Administrative - non-administrative	
Glamorous - ordinary	
Creative - uncreative	
High salary - low	
Secure - insecure	As in job security
Flexible hours - inflexible	
Good prospects - poor prospects	
Good facilities - poor	e.g. laboratory facilities, etc.
Uniqueness	The sense that the job is unmatched
High free time	Large % of hours off
Mobility	Prospects to move around, travel
Pleasant environment	Specifically work environment
Healthy	" " "

TABLE 11.6 CLASSIFICATION OF CULLEN & THOMAS' ELICITED VALUED ATTRIBUTES INTO THEIR UNDERLYING DIMENSIONS TO CREATE CORE VALUES, AS PART OF THE STAGE 3 ANALYSIS.

Core Value	Valued Attributes included
High Pay	High Pay
Security	Security
Good Prospects	Good Prospects
Personality Development	Developing the personality
Social/Political Commitment	Socially aware, Politically radical vs conservative.
Social Recognition	High status, Reputable, Uniqueness, Glamour.
Integration of Work and Lifestyle	Fits domestic needs, Family influences, Locational constraints, Flexible Lifestyle, Good social life, Flexible hours, High free time, Mobility.
Work Environment (physical)	Outdoors vs. indoors, Good facilities, Pleasant, Healthy.
Nature of the work (what is done)	Practical vs. abstract, People vs. things, Theoretical vs. applied, Scientific vs. not, Intellectual vs. not, Using degree, Administrative vs. not, Creative vs. not.
Style of the Work (how it is done)	Disciplined, Control over decisions, Autonomous vs. order following, At centre of things, Individualist.
General Satisfaction (vague)	Job satisfdction, Challenging, Interesting, Varied, Demanding.

> A value is an enduring belief that a specific mode of conduct or end-state of existence is personally or socially preferable to an opposite or converse mode of conduct or end-state of existence.....it is an intervening variable that leads to action.

Core Values can therefore be seen as deeply held beliefs likely to lead to actions. A Core Value is a general underlying value, while a VA might be specific to one particular option at one particular time. Thus VAs that were likely to be merely temporary, such as 'training constraints', were not considered to involve any Core Values (and so were ignored when CVs were created), whilst sometimes several VAs were classified as aspects of one CV. For example, 'status', 'glamour', 'uniqueness' and 'recognition', as used by these respondents in connection with their work, were all judged to be aspects of a Core Value for Social Recognition. The complete reclassification of VAs into CVs, which was loosely based on British job satisfaction research, e.g. Mumford (1972) appears in TABLE 11.6.

The constituents of a career anchor were thus operationalised as a set of Valued Attributes, which could also be reclassified into Core Values, or hypothesized underlying values. The frequencies of each of these at each decision time would demonstrate which VAs and CVs were common in the sample at which times, and which were idiosyncratic to a few individuals.

11.6.3 Differences between anchored and preanchored decisions.

The final central or crucial area involved the differences between the preanchored and anchored sets of values for each individual. These differences were operationalised in terms of (1) the constituents of the sets of values, and (2) their importance weightings (see also section 11.6, point [ii]).

(1) Constituents of the two sets of values: changes in the frequencies of VAs between first and latest decisions across the sample could be examined, to see if particular VAs became noticeably more or less frequent between preanchored and anchored decisions, i.e. more likely to be used at one time than another. Changes in the constituents of a set of VAs could also be investigated at the individual level, for example the first set might have been transformed into the second set via elaboration,

condensation, elimination of early values altogether or the addition of new VAs, or any combination of these. For example, elaboration would involve a rather general VA, such as 'good prospects', becoming several more distinct VAs in the anchored set, e.g. 'good chance of quick promotion', 'fringe benefits' and 'status'. Condensation would mean the reverse process, such as 'interesting work', 'using my degree' and 'fringe benefits' becoming 'good prospects'.

(2) Importance weightings (as in Section 11.6): a fluctuation in importance weightings was defined as representing the change in relative importance of a particular valued attribute to that individual. Thus if a person scored the attribute 'job security' as =4 at her first decision but as =9 at her latest decision, this value had obviously become much more important to her over time, and was a part of her career anchor. A person who scored it as =0 at first but as =8 later on would have incorporated it into her career anchor although it had not been part of her original value set, and someone who scored it highly at first but not at all later would have found out through experience that it was not after all part of his career anchor.

In this third crucial area of the differences between the two types of career decision (first and latest), tentative hypotheses based on the career anchors model were examined against the predictions of alternative theories and findings about occupational choice and change. These tentative hypotheses involved the consistency of individual sets of VAs and CVs between preanchored and anchored decision times, in an attempt to elucidate the process of becoming anchored. Two supplementary hypotheses were also examined, involving the total numbers of VAs and CVs in a preanchored set, as compared to an anchored set, and the importance weightings (scores) in a preanchored set of VAs compared to an anchored set.

The anchors model predicts that individuals will gradually learn by experience what they value, that sets of VAs and CVs will differ considerably between individuals and that numbers of VAs and CVs and their relative importances will change with experience. Before the details of the hypotheses tested and the results of this testing are discussed, the

characteristics of the Stage 3 sample will be described.

11.7 The Stage 3 sample and background findings.

The background characteristics of the 56 cases used in the present analysis (chosen as in Section 11.5) are shown in TABLES 11.7 - 11.16. The variables for socio-economic group and main first degree subject were collapsed as shown because of the small sample size. In the case of the main first degree subject, the engineering and science graduates were allocated a separate category to allow for any special effects that might have been produced by using them as the source for the model.The other two categories followed Cullen and Thomas's vocational and non-vocational distinction.

The composite variables for career type and predominant decision style were distributed as in TABLES 11.13 and 11.15. Because of the small sample size, both these variables were recoded for the present analysis. Career type was collapsed into two categories as shown in TABLE 11.14. This focussed the analysis more closely on whether or not a fixed career path typical of the main first degree subject had been followed. The new variable created by this recoding was therefore named degree based Stability. The predominant decision style was recoded around the presence or absence of a clear forward planning strategy (see TABLE 11.16). This had proved an elusive quality to measure in Cullen and Thomas's research (see Section 11.5) and it provided thought provoking results at Stage 2 of the present research (see Chapter 9, Table 1). The new variable highlighting planning was simply called Style, to distinguish it from Cullen and Thomas's decision style.

11.7.1 The Constituents of the value sets at each decision time.

The frequencies of the VAs at the first (preanchored) decision are shown in TABLE 11.17. It can be seen that the graduates used a wide variety of VAs at their first decisions. An equally wide range was used at the latest (anchored) decisions (see TABLE 11.17). Only a few of the most obvious VAs, such as 'pay' and 'interesting work' were generally popular at

TABLE 11.7

AGE at time of interview	N	%
34	13	26
35	21	42
36	11	22
37	1	2
38	2	4
39	1	2
41	1	2
Total:	50	

Not Given = 6 cases Mean Age = 35.32 S.D. 1.38

TABLE 11.8

SEX	N	%
Male	37	74
Female	13	26
Total:	50	

Not Given = 6 cases

TABLE 11.9

CLASS: Father's occupation at time that the graduate started on a degree course

	N	%
Professional/managerial	36	73
Clerical	5	10
Supervisory	6	12
Skilled Manual	2	4
Total:	49	

Not Given = 7 cases

Recoded to Socio-economic Group (S.E.G)

Professional/managerial	36	73%
Non-Professional/managerial	13	27%
Total:	49	

TABLE 11.10

NUMBER OF CAREER DECISIONS

studied during the interview	N	%
Two	42	75
Three	12	21
Four	2	4
TOTAL:	56	

TABLE 11.11

TIME between first and latest decision (years)	N	%
5 or less	27	49
6 - 10	19	35
11 to 18	9	16
TOTAL:	55	

Missing = 1 case Mean Time = 5.96 S.D. = 3.27

TABLE 11.12

MAIN DEGREE SUBJECT	N	%
Medical	3	6
Engineering	11	22
Science	13	26
Business	3	6
Social Science	5	10
Law	5	10
Arts	10	20
TOTAL:	50	

Not Given = 6

RECODED TO SPECIALITY	N	%
VOCATIONAL:		
main degree subject medicine, business or law.	11	22
ENGINEERING/SCIENCE		
main degree subject	24	48
SOCIAL SCIENCE/ARTS		
main degree subject	15	30
TOTAL:	50	

TABLE 11.13

CAREER TYPE as classified by Cullen and Thomas	N	%
FIXED VOCATIONAL: degree subject and job history coincide	18	35
APPLICATIONAL: rooted in degree subject, but a different type of application	4	8
DEVIANT: took vocational degrees but did not follow career typical of such degrees	13	25
LATE VOCATIONAL: did not take vocational degrees but kept to one career field	6	12
NON VOC LATE STABLE: have acquired a comparative degree of career stability after some occupational "trying out"	10	20
TOTAL	51	

Missing: 5 cases

TABLE 11.14

STABILITY OF CAREER PATH, derived from Cullen and Thomas' Career Type	N	%
Stable career path: Fixed Vocational and Late Vocational career types	24	47
Less stable career path: Applicational, Deviant and Non Voc Late Stable career types	27	53
TOTAL	51	

TABLE 11.15

Predominant Career DECISION

STYLE when changing jobs as classified by Cullen and Thomas	N	%
EXTERNAL: reasons beyond my control e.g. accident, redundancy, end of contract	13	25
DOMESTIC; e.g. marriage, spouse's job, move	4	8
PLAN: a clear idea of what I want to do next	19	37
SCAN: always kept an eye open for possible opportunities	7	14
CHANCE: an opportunity came up that was attractive	3	6
MULTI: used several of the above at various times	5	10
TOTAL	51	

Not given = 5 cases

TABLE 11.16

STYLE derived from Cullen and Thomas' Decision Style	N	%
Planned decision style (Plan)	19	37
Other, less planned decision styles (External, Domestic, Scan, Chance, Multi)	32	63
TOTAL	51	

TABLE 11.17 SUMMARY OF VALUED ATTRIBUTES (VAs) MOST FREQUENTLY ELICITED FROM GRADUATES AT EACH CAREER DECISION TIME, STAGE 3.

First decision, when not anchored (Pre-anchored)

		N	% of sample
1.	High Pay-Low	28	50
2.	Interesting-Boring Good Prospects-Poor	18	32
4.	High Status-Low Status	12	21
5.	Secure-Insecure	10	18
6.	Training, Qualifying Constraints People-Things	9	16
8.	Practical-Abstract Intellectual-Non Intellectual	8	14
10.	Flexible Hours-Inflexible	7	12

Latest Decision - Anchored

1.	High Pay-Low	28	32
2.	Good Prospects-Poor	20	36
3.	Fits Domestic Needs	18	32
4.	Interesting-Boring	14	25
5.	Locational Constraints	13	23
6.	Secure-Insecure	12	21
7.	People-Things	11	20
8.	Practical-Abstract Autonomy-Order Following High Satisfaction-Low	8	14

TABLE 11.18 VALUED ATTRIBUTES (VAs) THAT WERE MOST FREQUENTLY RETAINED FROM THE PRE-ANCHORED CAREER DECISION TO THE ANCHORED DECISION, STAGE 3.

Valued Attribute	N	%
High Salary-Low	22	39
Interesting-Boring	12	21
Good Prospects-Poor	9	16
People oriented-thing oriented	7	13
Locational Constraints		
Practical-abstract	5	9
High Status-Low		
Secure-Insecure		

TABLE 11.19 FREQUENCY DISTRIBUTION OF CORE VALUES (CVs) AT EACH CAREER DECISION TIME, STAGE 3.

A. The Pre-Anchored Decision Time CVs.		N	% of sample	% of all Core values mentioned
1.	High Pay	28	50	20
2.	Nature of Work General Satisfaction	27	48	19
4.	Integration with lifestyle	26	46	19
5.	Good prospects	18	32	13
6.	Social Recognition	13	23	9
7.	Style of Work	12	21	9
8.	Security	10	18	7
9.	Social/political Commitment	5	9	4
	Work Environment			
11.	Developing the personality	1	2	<1
	Total no. of CVs mentioned:	140		
	Average no. :	2.5		

B. The Anchored Decision Time CVs.		N	% of sample	% of all Core values mentioned
1.	Integration with lifestyle	30	54	19
2.	High Pay General Satisfaction	28	50	18
4.	Nature of Work	25	45	16
5.	Good Prospects	19	34	12
6.	Style of Work	18	32	12
7.	Security	12	21	8
8.	Social Recognition	9	16	6
9.	Social/Political Commitment	7	13	5
10.	Work Environment	4	7	3
11.	Developing the personality	3	5	2
	Total of CVs mentioned:	155		
	Average no.	2.77		

TABLE 11.20 FREQUENCY OF RETENTION OF CORE VALUES BETWEEN THE PRE-ANCHORED CAREER DECISION TIME AND THE ANCHORED DECISION TIME.

A.	Core Value Retained	N	% of sample
	High Pay	22	39
	Integration of Work and Lifestyle	20	36
	General Satisfaction		
	Nature of Work	18	32
	Good Prospects	9	16
	Style of Work	8	14
	Social Recognition	6	11
	Security	5	9
	Social/Political Commitment	3	5
	Work Environment	2	4
	Developing personality	-	-

B.	Number of Core Values Retained	N	% of sample
	5	1	2
	4	3	5
	3	15	27
	2	15	27
	1	21	38
	Nil	1	2

both times. High Status became noticeably less important over time, while Domestic Needs and Locational Constraints became distinctly more important for the sample as a whole.

Only 8 VAs were retained across the two decisions by more than 5 graduates (TABLE 11.18). Knowing which VAs a graduate used at the preanchored decision time did not necessarily predict which ones would appear in their career anchor, except that a core of at least one of the two of the same VAs, High Pay and Interesting Work, was retained by over 20% of the sample.

The frequencies of the Preanchored Core Values (PCVs) are shown in TABLE 11.19A. The creation of Core Values to show the overall main underlying dimensions of the Valued Attributes resulted in High Pay being the most popular Core Value, as it had been the most popular VA, but the Nature of the Work and a generalised Need for Satisfying work were also seen to be important, as was the Integration of Work with Lifestyle. By the time of the anchored decision (see TABLE 11.19B), Style of Work was definitely salient to more people, whilst Integration of Work with Lifestyle had become the most frequently elicited Core Value. Social Recognition (of which the VA High Status is the main constituent) decreased in frequency. The frequencies of most Core Values either stayed the same or showed a slight increase by the time of the anchored decision, so they were more likely to be retained at the anchored decision, as would be expected by their definition as underlying values. TABLE 11.20 shows that although again only 8 CVs were retained by 5 or more graduates, 38% of graduates retained at least one CV.

11.8 Hypothesis One: consistency of values across the sample.

Hypothesis One was that there would not be a high degree of consistency between the graduates in the VAs used at each decision point, because sets of values are idiosyncratic to the individual concerned.

The null hypothesis was that there would be a high degree of consistency, as Super's theory of occupational choice would predict, because all respondents would be coping with the same developmental tasks.

This should have been especially evident at the first decision point, since by definition this took place when all the graduates were considering the same developmental decisions.

Hypothesis One was examined using TABLE 11.17. Results were that at the first decision time, when no anchor was present, only 3 values (7.5% of all values elicited at this time) were used by 25% or more of the graduates. At the latest decision time, only the same three VAs plus one extra (10.5% of all VAs elicited at this time) were used by 25% or more of the graduates. Although it was apparent that 'high pay' and 'good prospects' were important to a substantial proportion of the sample, the variety of idiosyncratic VAs present showed that the major parts of both early and later value sets were not held in common across the sample. Hypothesis One was supported, and the career anchors model performed better than Super's theory in this context.

The fact that individual choices of VA appeared to be so idiosyncratic made any general examination of the patterns of VAs to find those typical of a first or a latest decision rather difficult. In an attempt to do this, a factor analysis using principal factors with iteration and varimax orthogonal rotation was carried out for each decision time. This showed that no clear and simple underlying structure was to be found in this data.

The graduates held and retained some Core Values in common with each other, but tended to place importance on different aspects (i.e the VAs) of these Core Values. For example, the Core Value for Integration with Lifestyle was mentioned by 48% of the sample at the Preanchored decision, yet none of its constituent valued attributes occurred this frequently. The most frequent was Flexible Hours, used by 12.5% of graduates. It was noticeable that five Core Values were common to more than 25% of the sample at the Preanchored decision time, while these five were joined by another, the Style of Work, at the Anchored decision time. This would be expected, given that the creation of CVs from VAs was intended to impose some degree of consistency.

11.9 Hypothesis Two: Consistency of Values Within Individuals.

Hypothesis 2 was that individuals would show some degree of consistency in their sets of values between their Preanchored and Anchored decisions. This was because a distinct core of values should remain, in accordance with the career anchors model of how people gradually discover through experience which of their original career related valued attributes are important. Super's developmental theory of occupational choice can be seen as predicting that graduates will be dealing with different tasks at different stages of their career development, so that the second set of VAs should be substantially different from the first set. Holland's differentialist theory of occupational choice would predict that an individual should normally retain their sets of VAs from one time to another, because these values are closely linked with personality. The career anchor model suggests a position midway between these two extremes.

Hypothesis 2 was examined using TABLE 11.21. This shows the consistency of retention of VAs. In fact 7% of graduates kept identical sets of VAs, 11% had totally different sets, and the majority (82%) held some VAs in common with their Preanchored Decision. Nearly threequarters of the graduates (71%) had retained more than a quarter of the VAs that they had used. VAs retained were usually ones that had scored highly on importance at the earlier decision time. At least one of their top three VAs at the first decision was retained by 68% of the sample. These results fit the predictions of the career anchor model better than those of the developmentalists or the differentialists, in that completely identical sets and completely different sets were both less likely to be found than an anchored set that had a reasonable amount of material in common with its preanchored predecessor. Hypothesis 2 was supported.

11.9.1 Consistency of Core Values within individuals.

A more detailed picture of the consistency of the individual graduates was found using Core Values. There were five possible patterns:

1. Maintenance. Exactly the same set of CVs were retained (i.e. even if different VAs were elicited the second time, they belonged to the

same underlying dimensions.)

2. Addition. The Preanchored set was retained at the Anchored decision but at least one more CV was added.

3. Contraction. The Preanchored set was retained, except that at least one CV was lost.

4. Adaptation. Most CVs were retained, but some were lost and some were gained.

5. Drastic Change. A drastic change in CVs took place between the two decisions; more were changed than were retained.

These patterns occurred as in TABLE 11.22. While 20% of the sample were entirely consistent, showing the Maintenance pattern, 25% were almost completely inconsistent, the Drastic Change pattern. The rarest pattern was Contraction. 75% of graduates (i.e. all except those showing the Drastic Change pattern) did retain at least one Core Value. In fact, even among the Drastic Changers, all but one graduate retained at least one Core Value. The consistent people included four individuals who not only retained all their CVs, but did not change any of their VAs. It is possible that these individuals may have found their career anchors uncommonly early.

Crosstabulations (see TABLE 11.23) suggested some possible associations between certain groups of graduates and particular patterns of CV change:

The strongest association found was between sex and change pattern. No women at all had used pattern 5, the drastic change. It was speculated that women graduates had to pursue their careers single mindedly in order to maintain them at all after twelve years. They were less flexible than the men in their career related values.

The majority of graduates who were older than average had the most drastic pattern of change. This might have been expected, because these were the mature students, who had graduated later than the rest of the sample. These changes in their career related values may have been connected with returning to education.

TABLE 11.21 CONSISTENCY OF RETENTION OF VALUED ATTRIBUTES BY INDIVIDUALS BETWEEN THEIR PRE-ANCHORED AND ANCHORED CAREER DECISION TIMES

A: Percentage of valued attributes used at anchored decision that were retained from pre-anchored decision.

	N	%
0	6	11
1 - 25	10	18
26 - 50	18	32
51 - 75	14	25
76 - 99	2	4
100	6	11
	56	

B: Number of top three valued attributes at pre-anchored decision that remained in the top three at the anchored decision.

	N	%
0	18	32
1	19	34
2	16	29
3	3	5
	56	

68% retained some top attributes.

TABLE 11.22 PATTERNS OF RETENTION OF CORE VALUES IN INDIVIDUALS BETWEEN PRE-ANCHORED AND ANCHORED CAREER DECISION TIMES.

PATTERN	N	% of sample
Maintenance	11	20
Addition	13	23
Contraction	6	11
Adaptation	12	21
Drastic change	14	25
TOTAL:	56	

TABLE 11.23 CROSSTABULATIONS OF CORE VALUE RETENTION PATTERNS WITH OTHER VARIABLES INVOLVED IN CAREER DECISIONS.

	PATTERN OF CORE VALUE RETENTION					
	Maintenance	Addition	Contraction	Adaptation	Drastic Change	Totals
Men	6	8	4	8	11	37
Women	5	3	2	3	0	13
	11	11	6	11	11	50
Age 34-36	10	11	6	11	7	45
Age 37-41	1	0	0	0	4	5
	11	11	6	11	11	50
Time Between Decisions:						
1-5 years	7	5	1	6	7	26
6-10 years	3	7	3	3	3	19
11-18 years	0	1	1	3	4	9
	10	13	5	12	14	54
Planners	7	9	4	6	6	32
Non Planners	4	2	2	5	6	19
	11	11	6	11	12	51
Fixed Career	8	8	1	6	4	27
Less Fixed	3	3	5	5	8	24
	11	11	6	11	12	51
Degree:						
Vocational	4	1	2	1	3	11
Engineering/ Science	3	7	3	6	5	24
Humanities	4	3	1	4	3	15
	11	11	6	11	12	50

People who showed the Addition pattern were less likely than average to have been Planners, but were more likely than average to have taken Engineering or Science degrees. People with degrees in Engineering or Science were less likely than average to show the Adaptation pattern. They may have 'drifted' into work with few clear ideas about careers, and added on more Core Values later, without needing to change or totally discard any.

The Contraction pattern was typical of a Stable Career path. It may be that these graduates contracted their *CVs because they had a stable career* path, knew where they were going and discarded a few CVs because 'you can't have it all'.

People showing the Addition pattern or the Maintenance pattern, i.e. not discarding any CVs, were less likely than average to have been following a Stable Career path. They may have been thinking their careers out as they went along, building a career anchor on their original few preanchored Core Values.

11.10 The third group of hypotheses: types of change between decisions.

Section 11.4 discussed how Schein's original three components of an anchor were subsumed under the general heading of a set of valued attributes. The third set of hypotheses here examined whether there was any empirical basis for the division that Schein made when he proposed that an anchor had three subsets or components. He named these as Talents & Abilities, Motives & Needs, and Attitudes & Values. After Schein, the components examined in the present research were called Skill and Ability related values, Lifestyle values and more generally Job Related values (cf. Schein's motivating values). The VAs elicited by Cullen and Thomas were divided into these subsets as in TABLE 11.24.

It was predicted that a regard for the salience of these three components might develop at different rates and at different times during the career. The skill and ability related values would be likely to be discovered early in the working life, since educational specialisation usually occurs well before entry to a degree course. The lifestyle values,

involving the integration of work and home life, naturally develop as the graduate gets older. The majority in this sample were likely to have got married, bought houses and started a family. Everyone will have begun to establish a lifestyle that suits them. The more closely job related values involve the person's integration of their motivations and preferences with their work, such as preferring to work outdoors, or preferring abstract figure work to working directly with people. This type of value can be subject to considerable revision through experience, e.g. when a person discovers after a couple of years that the highly mobile job she always wanted is both physically exhausting and mentally undemanding.

Hypothesis 3Ai was that the total number of skill values used would not be subject to any significant change between the first and latest decisions.

The results of testing these are shown in TABLE 11.25. The total number of Skill Values present per individual did not alter significantly between the two decisions, so Hypothesis 3Ai was supported.

Hypothesis 3Aii was that the importance ratings of the skill values would not be significantly different between the first and latest decisions.

For Hypothesis 3Aii, the range of importance ratings shown for the two most popular VAs, People vs Things and Intellectual work, were tested. The distinction between work with people and work with things produced a greater range of scores at the second decision, but the distinction between intellectual and non-intellectual work produced a difference in the opposite direction, with a narrower range of scores at the anchored decision. Possibly this second distinction is more salient just after graduation on leaving the academic environment. Neither of these differences in range were large enough to reach statistical significance, so the hypothesis was technically supported, but the differences were noticeable enough to give rise to some doubt about the strength of this support.

Hypothesis 3Bi was that the total number of Lifestyle values should increase between the first and latest decisions.

Hypothesis 3Bii was that the Lifestyle values would be rated as more important at the latest decision than they were at the first decision.

The results of these are shown in TABLE 11.26. The total number of Lifestyle VAs used did increase significantly between the two decisions, so Hypothesis 3Bi was supported. Hypothesis 3Bii was examined for the two most popular VAs, Domestic Needs and Locational Constraints. The range of scores on these had increased considerably by the Anchored decision and these differences were significant, so this hypothesis was supported. This result also supports Evans and Bartoleme's work (see Chapter 4 Section 3) on the increasing salience of lifestyle as the career develops.

Hypothesis 3Ci was that the total number of general job related values would be significantly different between the first and latest decisions.

Hypothesis 3Cii was that the general job related values would show significant differences in ratings between first and latest decisions.

Hypothesis 3Ciii was that the general job related values, if retained at the latest decision, would be rated more highly than at the first decision. This would agree with Schein's view that people learn what facets of work are most important to them by experience.

The results from these are shown in TABLE 11.27. The total number of general job related VAs decreased slightly between the two decisions: this decrease was not significant, so Hypothesis 3Ci was not supported. Two of the four most popular general VAs, High Pay and Good Prospects showed a wider range of scores at the first decision, and two, Control over Decisions and Security, did so at the latest decision. None of these differences was particularly large, and none reached significance, so Hypothesis 3Cii was not supported. Hypothesis 3Ciii was tested for the most popular general values. None of these showed a wider range of scores when retained at the latest decision, so this hypothesis was definitely not supported. Overall, the lack of support for these three hypotheses suggests that these more general values were superceded in importance by VAs that were more specific to the individual by the time of the latest decision, perhaps by a process of elaboration, or by elimination and the addition of new VAs. The patterns of change in Core Values discussed in

TABLE 11.24 VALUED ATTRIBUTES ELICITED AT CAREER DECISION TIMES MAPPED ON TO THREE POSSIBLE COMPONENTS OF A CAREER ANCHOR

Component	Valued Attributes included
Skilled and Ability Related Values	Intellectual vs not, Creative vs not, Administrative vs not, Practical vs abstract, People vs things, Theoretical vs applied, Scientific vs not, Using Degree
Lifestyle Values	Fits domestic needs, Locational constraints, Family influences, Socially aware, Politically radical vs conservative.
Generally Job Related Values	High pay, Security, Good Prospects, Developing the Personality, High status, Reputable, Uniqueness, Glamour, Flexible Lifestyle, Good social life, Flexible hours, High free time, Mobility, Outdoors vs indoors, Good facilities, Pleasant workplace, Healthy, Disciplined, Control over decisions, Autonomous vs order following, At Centre of things, Individualist, Job satisfaction, Challenging, Interesting, Varied, Demanding, Committed to a Product.

Valued Attributes not allocated to a component: Training Constraints, Chance.

TABLES 11.25 - 11.27 TESTING THE THIRD GROUP OF HYPOTHESES ABOUT CHANGES IN THE THREE COMPONENTS OF A CAREER ANCHOR BETWEEN THE PRE-ANCHORED AND ANCHORED CAREER DECISIONS.

Key

All tables show the results of T tests on various differences between the two career decision times.

First decision = Pre-anchored

Latest decision = Anchored

* = result is statistically significant at the 0.05 level of confidence

S.D. = standard deviation

df = degrees of freedom

TABLE 11.25 TESTING HYPOTHESIS 3A: Skill Values

No. of Skill Values used		Mean	S.D.	df	t
At First Decision		0.73	0.92	55	1.15
At Latest Decision		0.61	0.82		
Range of Scores on Skill Values					
At First Decision	People vs. Things	4.46	3.69	12	-1.02
At Latest Decision		6.00	3.19		
At First Decision	Intellectual vs. Not	6.00	3.98	10	0.46
At Latest Decision		5.09	4.09		

TABLE 11.26 TESTING HYPOTHESIS 3B: Lifestyle Values

No. of Lifestyles Values used		Mean	S.D.	df	t
At First Decision		0.32	0.51	55	-4.39*
At Latest Decision		0.77	0.79		
Range of Scores on Lifestyle Values					
At First Decision	Fits Domestic needs	1.58	3.02	19	-5.53*
At Latest Decision		7.00	2.75		
At First Decision	Locational Constraints	2.69	3.84	12	-4.15*
At Latest Decision		7.31	2.10		

TABLE 11.27 TESTING HYPOTHESIS 3C: General Job Related Values

No. of General Values used		Mean	S.D.	df	t
At First Decision		2.63	1.83	55	0.22
At Latest Decision		2.57	1.32		
Range of Scores on General Values					
At First Decision	Decision	3.82	3.75	10	0.62
At Latest Decision	Control	4.91	4.01		
At First Decision	High Pay	5.47	3.48	33	0.18
At Latest Decision		5.32	3.13		
At First Decision	Security	3.71	3.79	16	-0.84
At Latest Decision		4.82	3.49		
At First Decision	Good Prospects	4.76	4.04	28	0.18
At Latest Decision		4.55	3.61		
Difference in Scores when General Values were retained					
At First Decision	High Pay	6.91	2.49	21	1.11
At Latest Decision		6.27	2.21		
At First Decision	Good Prospects	7.78	1.30	8	1.45
At Latest Decision		6.89	2.15		
At First Decision	Interesting	8.33	1.07	11	2.17
At Latest Decision		7.83	1.03		

Section 9.1 gave further clues to how this process may have occurred.

11.11 Hypothesis Four: Numbers of VAs per set.

Hypothesis 4 was that there would be a difference in the total number of VAs cited between the two occasions,(irrespective of whether these were actually the same VAs on each occasion).The interview data did not give clear guidance as to whether anchored changes (the later ones) would involve fewer VAs, equivalent to the 'core' of the anchor, or more, because the person had sorted out and elaborated on what was important, having had only a few ideas when they embarked on their career. However, it was more likely that experience would lead to more VAs and CVs being discovered and adopted over time. A Total Attribute Difference variable was created to investigate this hypothesis.

There was a slight difference between the two decisions, (see TABLES 11.28A & B) in the direction that people were slightly more inclined to use more VAs and CVs in the later decision. This difference in VAs was not significant at the 5% level. However, T tests on various subgroups of the sample showed that there were in fact some interesting differences between them,(see TABLE 11.29). The only group who did not use more attributes at their latest decision were the graduates who had followed stable careers. The rest, those with less stable or "fixed" career paths were the only group whose Total Attribute Differences were large enough to reach statistical significance. Men were no more likely than women to use more VAs in their second decisions, and science and engineering graduates were not more likely than others to use fewer VAs in their later decisions. This suggests that the type of career path followed was important in relation to the Total Attribute Difference variable.

T tests were also used to check that the programme used was not significantly related to the difference in Total Attributes, because the Selstra programme has been cited as producing more attributes than its alternative, Maud. This had not been expected to influence the results, since each respondent used only one of the programmes and this was found to be the case.

A set of independent variables were investigated for their relationship with the Total Attribute Difference variable. These variables were derived from the interview data, previous research findings and a knowledge of the computer interview format. They were: the number of years between the first and last decision (Time), the age, sex and class of the respondent, their speciality, their predominant decision style, their stability of career path and the number of their decisions that were examined by the interactive computer programme.

The career anchors model would predict that the number of years between the two decisions would be relevant to Hypothesis 4, because this reflects the time over which work experience and self awareness are increasing. Age would also be of obvious relevance here, since older people, on average, might be expected to have learned enough about themselves to have formed a career anchor. The style and the stability of career path were of theoretical interest given the interview data from Stage 2 of the present research.

The demographic variables of sex and class are frequently cited as strong influences in graduate career behaviour (e.g. Kelsall,1972). The number of decisions investigated was included because of the lengthy and complex interview procedure used by Cullen and Thomas. As the individual became more familiar with the procedures as several decisions were examined, they might have altered their responses to get the interview over more quickly.

The correlations between all these independent variables and Total Attribute Difference are shown in TABLE 11.30. It can be seen that Stability correlates negatively with Total Attribute Difference at a low but statistically significant level. This may be interpreted as meaning that people with very stable career patterns were less likely than others to use many more attributes at their latest decision than at their first one. Possibly they were nearly anchored even at the time of their earlier decisions.

An inspection was made of the measures of association, zero order correlation coefficients and partial correlation coefficients between the

independent variables concerned (see Appendix 4). The only correlations that reached the confidence levels conventionally used by psychologists to assess statistical significance were:

(1) The correlation between sex and Speciality. This was as expected. As found in previous studies (e.g. Kelsall 1972) women were less likely to have studied engineering or science (-0.30) but more likely than men to have studied arts or social science (0.41).

(2) The correlations between the variable for number of decisions and both Age (0.27) and Time between first and latest decision (0.32). Although these both reach the 0.05% confidence level, they are still quite low, considering that older people would be likely to have taken more decisions, and that over a longer period of time everyone is likely to have taken a larger number of decisions.

These findings suggest that the length of time between decisions and the presence of a stable career path seemed to reduce the likelihood of the number of VAs at the latest decision being much greater than the number used at the first decision.

11.12 Hypothesis Five: Score Differences.

Hypothesis 5 was that importance weightings should increase at the later decision, when people would have been more sure about what they wanted and how highly they valued it. This hypothesis was investigated using a new variable created to examine the changes in the subsets of VAs. This was the comparison between the ranges of importance weightings found amongst the VAs at each decision (for an individual), called Score Difference (see TABLE 11.31).

Results were that importance weightings did increase, but the difference found for the sample as a whole was not enough to indicate a statistically significant relationship at the 0.05% confidence level (see TABLE 11.32) so this hypothesis was not supported. Further inspection of T tests on subgroups showed that all groups did tend to use a wider range of scores for their VAs at their later decisions. The graduates who used the

TABLE 11.28 TOTAL NUMBER OF VALUED ATTRIBUTES AND CORE VALUES USED BY INDIVIDUALS BETWEEN THE PRE-ANCHORED AND ANCHORED CAREER DECISION TIMES

A: Valued Attributes (VAs)

	N	%
Increase in number of VAs by the anchored decision	30	54
No difference in totals	15	27
Decrease in number of VAs by the anchored decision	11	20
TOTAL	56	

B: Core Values (CVs)

	N	%
Increase in total number by the anchored decision	22	39
No difference in totals	23	41
Decrease in total numbers by the anchored decision	11	20
TOTAL	56	

TABLE 11.29 TESTING HYPOTHESIS FOUR ABOUT TOTAL ATTRIBUTE DIFFERENCE

Total Attribute Difference is the number of Valued Attributes used at the anchored career decision time minus the number used at the pre-anchored decision. KEY as for TABLES 11.25-11.27.

Groups Compared by T Test	Mean no. of VAs	S.D.	df.	t.
All graduates				
At first decision	3.93	2.04		
			55	-0.95
At latest decision	4.20	1.34		
Men				
At first decision	4.12	2.17		
			36	-0.38
At latest decision	4.24	1.42		
Women				
At first decision	3.46	1.61		
			12	-1.74
At latest decision	4.15	1.21		
Engineering/Science Graduates				
At first decision	4.00	2.36		
			23	-0.36
At latest decision	4.17	1.55		
Other Graduates				
At first decision	3.88	1.75		
			25	-1.15
At latest decision	4.27	1.19		
Graduates with Stable Careers				
At first decision	4.42	2.47		
			23	0.75
At latest decision	4.04	1.55		
Graduates with less stable careers				
At first decision	3.48	1.45		
			26	-4.12*
At latest decision	4.37	1.15		
Graduates who plan ahead as their decision style				
At first decision	4.11	2.38		
			18	-0.21
At latest decision	4.21	1.13		

Continued...

TABLE 11.29 (Continued)

Groups Compared by T Test	Mean no, of VAs	S.D.	df.	t.
Graduates with other decision styles				
At first decision	3.81	1.82		
			31	-1.23
At latest decision	4.22	1.48		
Graduates using MAUD programme				
At first decision	4.00	2.22		
			22	-0.31
At latest decision	4.13	1.29		
Graduates using SELSTRA programme				
At first decision	3.88	1.93		
			32	-0.94
At latest decision	4.24	1.39		

TABLE 11.30 CORRELATIONS BETWEEN TOTAL ATTRIBUTE DIFFERENCE AND OTHER VARIABLES INVOLVED IN CAREER DECISIONS.

Total Attribute Difference is the number of Valued Attributes used at the Anchored career decision minus the number used at the Pre-Anchored decision.

KEY: Correlations marked with ⊙ are Spearman correlation coefficients. All others are Pearson correlation coefficients. Correlations marked with * are significant at the 0.05 confidence level.

Independent Variable	
Sex	0.14
Age	0.15
Time	-0.20
Number of decisions	-0.09
Style	-0.05
Class	⊙-0.03
SEG	-0.04
Stability	-0.28*
Speciality	⊙-0.13
Vocational	0.18
Engineering/Science	-0.08
Arts/Social Science	-0.07

TABLE 11.31 DIFFERENCE IN RANGE OF IMPORTANCE WEIGHTINGS OF VALUED ATTRIBUTES BETWEEN THE PRE-ANCHORED AND ANCHORED CAREER DECISION TIMES (SCORE DIFFERENCE).

Score Difference	N	%
-6 to -1	8	14
Nil	26	46
1 to 9	22	39
Total:	56	

Mean: 0.38 S.D: 2.19

Example: Calculation of Score Difference for an Individual Graduate

Pre-Anchored Valued Attribute	Importance Weighting
High Pay	4
Intellectual vs. not	8
Security	7
Good Prospects	8
All others	0

Range = 0-8

Anchored Valued Attribute	Importance Weighting
Locational constraints	8
Varied	9
Intellectual vs. not	8
Individualism	1
All others	0

Range = 0-9

.. Score Difference = 9-8

= 1

TABLE 11.32 TESTING HYPOTHESIS FIVE ON SCORE DIFFERENCE

Score Difference is defined in Table 11.31. KEY as for TABLES 11.25-11.27 & 11.2

Groups Compared by T test	Mean score on top ranked VA	S.D.	df.	t
ALL GRADUATES				
At first decision	7.86	1.82		
			55	-1.28
At latest decision	8.23	1.65		
Men only				
At first decision	7.78	2.15		
			36	-1.30
At latest decision	8.30	1.41		
Women only				
At first decision	7.92	0.95		
			12	-0.28
At latest decision	8.08	2.50		
Engineering/Science Graduates				
At first decision	8.13	0.95		
			23	-2.10*
At latest decision	8.50	0.98		
Other Graduates				
At first decision	7.54	2.21		
			25	0.77
At latest decision	8.00	2.47		
Graduates with Stable Careers				
At first decision	7.25	2.52		
			23	1.08
At latest decision	7.88	2.05		
Graduates with less Stable Careers				
At first decision	8.30	0.82		
			26	0.83
At latest decision	8.56	1.31		
Graduates who plan ahead as their decision style				
At first decision	7.53	2.09		
			18	2.10*
At latest decision	8.42	0.96		
Graduates with other decision styles				
At first decision	7.97	1.77		
			31	0.36
At latest decision	8.13	2.04		

style of planning ahead showed large enough Score Differences to be statistically significant, as did the engineering/science graduates. This suggested that both Speciality and Style affected the value of Score Difference, and it may be speculated that both the planners and the emgineering/science graduates had achieved a much clearer picture of their values by the time of their Anchored decisions. Alternatively, they may have been rationalising choices already taken early on in the career by reaffirming the same Valued Attributes more emphatically. Evidence from Section 11.9.1 on Core Value retention patterns suggested that the planners may have been reaffirming while the engineers and scientists had learned a lot more about themselves.

A multiple regression procedure (see Appendix 4) showed that when Score Difference was collapsed into three categories (positive, zero and negative) the variance explained by using the set of independent variables that were investigated in connection with Total Attribute Difference (Section 11.1, TABLE 30) was 31%. This form of analysis suggested that both women and people who plan ahead were more likely than men and non-planners respectively to show a high positive Score Difference: in other words they had begun to use distinctly higher importance ratings of VAs at their latest decisions. Older people were less likely to show a high Score Difference; perhaps they already knew more about what they valued by the time they reached their first decisions. Graduates who showed negative Score Difference, i.e. those who used high scores the first time but much lower ones later, were more likely to be older men whose predominant decision style was not one of clear forward planning.

11.13 Conclusion

Although all conclusions drawn must be very tentative, given the small and not necessarily representative sample, some interesting differences between anchored and pre- anchored decisions, in terms of their constituent sets of Valued Attributes and Core Values, have been identified.

When the ideas drawn from the career anchors model are compared with those derived from Super's lifespan developmental theory and Holland's differentialist theory, the career anchors model was more successful for both Hypotheses 1 and 2 when Valued Attributes were examined. The major proportions of the constituents of both preanchored and anchored sets were not held in common across the sample (Hypothesis 1). When the consistency of individuals in retaining VAs at the anchored decision was considered, the second sets were likely to be neither totally different nor completely identical (Hypothesis 2).

It could be interpreted that the percentage of Valued Attributes retained was not sufficient to support Holland's theory that people normally retain their values over time, but the Valued Attribute sets did not differ sufficiently over time to necessarily support Super's theory that totally different tasks were being tackled during the anchored decisions.

When Core Values and their patterns of change were studied, their consistency of use across decisions, both across the sample and for individuals, was higher than that of the VAs. Thus the actual attributes elicited varied idiosyncratically, but their underlying dimensions were more likely to be held in common. This was as expected, given the definition of a Core Value. However, even the most frequent Core Values were only common to approximately half the sample at any one time of decision, hardly enough to confirm that all were necessarily coping with exactly the same tasks, as would be expected given Super's theory.

The career anchors model, depicting flexibility in career development as a phenomenon that arises because people gradually discover their career anchors during and through their work experience, was supported by the Stage 3 analysis. An examination of the detailed differences between the set of VAs and CVs used at the preanchored decision time and the set used once anchored provided more information on how an anchor may be found: a considerable proportion of CVs became a fixed core around which the person's choice could remain flexible, although in some cases a few CVs were also discarded or added between the preanchored and anchored decisions.

All the findings emphasized the individual nature of flexibility in career decision making. Flexibility did usually take place around a consistent core of values, but those aspects of these Core Values which were considered most important varied over time. Individuals tended to retain a core of consistency: one or two Core Values and at least one or two Valued Attributes that they both retained and rated highly at both decision times. Schein's original division into three components, as modified here, provided a more detailed examination of which Valued Attributes were likely to change over time as people found their anchors, and of the direction in which they were likely to change.

The numbers and importance weightings of Skill and Ability related values did not necessarily change between non-anchored and anchored decisions. These values may already have been established during the period of education, and therefore they were less likely to have been affected by work experiences. It may be that people had already learned quite a bit about which skills and abilities they enjoyed using during their experiences of the educational system.

The numbers and range of the importance weightings of lifestyle related values did increase by the time an anchor was found. This suggested that home life was an integral part of an anchor for most graduates. This was confirmed by the increasing likelihood of inclusion over time of the Core Value Integration of Work with Lifestyle. The importance of discovering the Style of Work that suits a person, and of integrating the requirements of a job with the lifestyle preferred (usually that of the nuclear family), both increased over time to become part of many graduates' career anchors. By the time an anchor was found, more general values about work were likely to have been superceded by more specific values idiosyncratic to the individual and their circumstances, especially those relating to the Core Value Style of Work. Thus Schein's original idea of separate components led to some fruitful investigations about which VAs and CVs would be likely to change the most in the process of finding an anchor.

People who had found their anchors were likely to use higher importance weightings on their VAs than they would have done before finding an anchor. This was postulated to be because they had become more sure of

their values through time and experience. It must however be noted that problems arise in drawing conclusions from the examination of differences in importance weightings. The decision analysis method of eliciting importance weightings is commonly used with constraints on the numbers of valued attributes elicited for each decision (see Wooler, 1985). Comparisons have been made here without taking the number of VAs used into account.

Decision analysis based on the kind of elicitation procedures used by Maud and Selstra, i.e. methods which focus on differences between attributes, can be criticised for failing to elicit valued attributes that are common to all options considered. Often,these will be the most strongly held. However such attributes that are missing from the present analysis for this reason would if anything have tended to increase the differences found. It could also be argued that the use of parametric statistics may give a false impression of generalisability when applied, as in this case, to results from a non-random sample. Nevertheless, the findings suggest some interesting trends that justify further research.

The division of Valued Attributes into Core Values was also useful here, in clearly identifying different patterns of change between preanchored and anchored decisions. There was some evidence that different groups of people developed their career anchors in different ways, e.g. only those who followed Stable career paths were likely to contract their number of Core Values by the time they became anchored, and people who took engineering or science degrees but did not have detailed long term plans were most likely to maintain some Core Values and add some more. The latter people, it was speculated, had drifted into work and afterwards learned that it suited them, while the former group found they had to lose some of their CVs as their Stable paths could not satisfy all of them.

People who had made long term career plans were especially likely to show an increase in the range of their importance weightings. Engineering and science degree graduates were especially likely to have become increasingly sure of their VAs by the time they were anchored. It is suggested that all these people may have become increasingly sure of their VAs because they based their plans and choices around them, and discovered

that this was successful. It could be argued that both the planners and the engineers and scientists may have been psychologically inclined to see their career related values in increasingly extreme or 'black and white' terms, showing little tolerance for ambiguity. They could have been people who feel at home with clearly stated facts and precise arguments.

There was no evidence that the female graduates were different from the males in their anchored or non-anchored decisions, in terms of the Valued Attributes or Core Values used, although they did specialise in different degree subjects. However their patterns of change in Core Values over time never included the drastic changes found in a quarter of the total sample. It was concluded that women graduates had probably needed to be extremely single-minded about their career related values to retain a career twelve years after graduation.

When all this evidence is taken together, it provides fascinating clues into the ways in which graduates showed flexibility in career development. At least two ways of finding an anchor are suggested. One type of person follows a stable career path, knows what they want more or less and sticks with it. These soon begin to plan ahead and are more likely to discard a few CVs than add more during the first dozen years after graduation.

Another type has no very clear idea what career they want, even though they may take degrees conventionally regarded as vocational; they 'drift' into work. Their Core Values alter more during the discovery of an anchor than those of the first type, as they adapt them or add to them.

The drastic change pattern of CVs may be representative of a third type, but it is equally possible that this pattern can arise after the working life has started off as either one of the previous two types.

12. CONCLUSIONS

12.1 Summary

In this chapter the conclusions are drawn that flexibility is an important factor in graduate career development, and that the research reported has begun to bridge a gap between large scale surveys of occupational mobility and case studies of particular occupational groups. The career anchors model derived from Stage 2 data and further examined at Stage 3 also has some potentially important implications for careers counselling of adults. Briefly, this model, described more fully in Chapters 10 and 11, postulates that career development is a gradual evolutionary process during which people become more aware of their career related values through their actual work experience. Thus a career anchor, or core set of values that an individual will not give up, is gradually discovered during the earlier years of a graduate's work career. More detailed conclusions are dealt with in terms of the five research questions as set out in Chapter One.

12.2 How much change did they (the graduates in this study) think their careers had undergone?

The population selected from the UMS Survey at Stage 1 were chosen because they conformed to a definition of occupational change imposed upon their work histories from an outside perspective. The intention behind this selection procedure had been to pinpoint cases where flexibility appeared to have been chosen by the individual rather than forced by circumstances. 93% of those who replied to the Contact Survey confirmed that they thought that they had made at least one occupational change. Some of the changes they had made occurred under circumstances of "no choice", but the majority apparently demonstrated that they had chosen to

be flexible during their career development.

When these changes were further investigated in a sample of the Contact Survey respondents (Sample One) at Stage 2, it emerged that only a minority of the changes made were radical shifts between two distinctly different occupations, e.g. engineers who had become managers were commoner than metallurgists who had become social workers. However it must be remembered that all the people having these experiences thought of them as occupational changes.

Investigating this question highlighted the problems of attempting to define occupational change. It became clear that occupational mobility surveys can only define and count changes to the extent that their coding systems are effective. Any estimation of the frequency of occupational change in a large population is likely to be fairly inaccurate. When case studies or more personalised semi-structured questionnaires are used, the number of changers will alter, for samples of the same population, and may bear little relation to the results obtained from a survey of work histories. A person's subjective perspective on change is not necessarily predictable from a list of the jobs they have held.

The implications for the study of flexibility are that the flexibility that a person thinks they have shown and the amount an observer would attribute to them may be very different. A person may feel that they have been very flexible in their career progress, when they do not appear to an outside observer to have done anything of any note at all, and vice versa. Both perspectives are valid; the subjective inside view is important in fully understanding flexibility that has been chosen rather than forced upon an individual by circumstances.

12.3 What form did any changes take? (What kind of occupational changes did they make?).

The research produced two typologies: one of types of change and one describing progress through the career.

At Stage 1 the typology of changes derived from previous theories and research was used by the respondents in 70% of cases. Three of the categories described flexible changes, while the fourth portrayed flexibility shown in a situation of no choice, which would be more appropriately described as adaptability. The four types of change were modified after the Stage 2 interviews to give six types. These were:

A. No Choice. Adaptability under unavoidable circumstances.

B1. Chance Opportunity. The person was satisfied, and was not looking around, but had a good opportunity by chance. A possible example might be where an organization offers to move a promising person into a different sector that they had not thought of entering, but which provides good prospects.

B2. Opportunity and Ambition. The person was satisfied, but was looking around and saw an opportunity. They may have intended to change at some time. Such a person is likely to be ambitious.

B3. Time for a change. The person became dissatisfied, then looked around and found an opportunity. The job left may have become less challenging due to success and "plateauing", or may always have been a means to an end.

C. Mismatch. The person was never particularly satisfied, and eventually changed. The previous job may have been a means to an end, or a total mistake. Whichever of these it was, the situation became so dissatisfying that anyone would have started to look around for something else.

D. Personal Change. The person has developed their personality considerably, and has then found a new and more suitable occuaption. Some of these will be the drastic changes, such as metallurgist to social worker.

The Stage 2 interviews showed that the graduates' progress through their careers in the first ten years could be divided into three categories (Early change; Evolution, including Return; and Late change), according to how quickly they made changes in occupation. Any type of

change (from A to D) could take place at any time, and, as pointed out in Section 12.2, some changes took a much more drastic or radical form than others.

Stage 2 also showed that there were many forms that change could take. There was no straightforward distinction between an occupational change and a job change. This was essentially because of the different perspectives obtained when change is described by the changer or by an observer. In a sense, each person's change experience was unique; nevertheless various classifications of changes were suggested. These were designed to improve communication of knowledge about the change phenomenon between observers, and also between observers and changers.

12.4 Did the graduates consider their changes to be unusual in any way?

The answer to this question was definitely No. Essentially when asked, by implication, "how did you manage to be so flexible?" the Stage 2 respondents were replying "why not be flexible?" Even though the sample at Stages 1 & 2 were from very specific educational backgrounds with degrees in engineering or science, (specialities which could readily provide jobs for them), they did not usually leave higher education with totally fixed ideas about the occupations open to them. The men with previous work experience were the exceptions here. It can be argued that this sample, like Sadowsky's dentists who never practised (Chapter 3) were unusual in being so flexible, however, when recalling their career decisions, the engineers and scientists in the separate sample used at Stage 3 (Sample Two) also behaved in accordance with the career anchors model derived from Stages 1 and 2. They had usually altered their career related values to some degree over time.

Evolution was the term that most people preferred to describe their career progress. It was clear that this evolution had been quite a normal expectation for them, and there was no support for the one-life one-career imperative. Many of the graduates studied chose flexibility without suffering great stress, at least in any long term sense, because for them it was the norm. Few mentioned any expectation that the jobs they took just

after graduation necessarily meant that they would remain in the same occupation for life. If this did occur to them, it was usually as a spur to move elsewhere, a realisation that they were dissatisfied.

Change was experienced as an integral part of their career development.

12.5 How did they manage their changes, and what did they feel about them?

As described above, changes were not problematic to those interviewed at Stage 2. Several styles of reacting at the time of change were implied by the results to the question about planning. There had not necessarily been a great deal of forward planning. Several other styles of behaviour, such as reacting to job changes in accordance with strong views on locational or domestic commitments (frequently valued at Stage 2) or keeping an eye on possible opportunities, were found. Some graduates had used a great variety of styles during the early years of their careers.

These categories of behaviour were drawn upon and developed by Cullen and Thomas into the 'predominant Decision Style' variable, which consisted of seven categories (Plan, Externally or Domestically Motivated; Chance; Desperate; Multidimensional). At Stage 3 of the present research this variable was simplified into a dichotomy between a style involving long term planning and the other styles. When two career decisions were studied, one before the career anchor was found and one afterwards, style affected some aspects of the relationship between the two decisions, e.g. long term planners were more likely to have a much clearer picture of the relative salience of their career related values at their later (anchored) decision times, than they did in their earlier career decisions.

The values and beliefs that all the graduates studied associated with their occupational changes covered a wide range, and tended to be fairly idiosyncratic to the individual concerned; however the model of a career anchor helped to explain how these graduates managed their changes. At least two of Schein's original types of anchor, technical-functional competence and and managerial competence, were apparent in the Stage 2 interviewees. These are supposed to represent the core satisfactions obtained from the occupational career, those elements that a person

discovers that they will not willingly give up when contemplating a job change.

It was found at Stage 3 that an anchor may have different influences over change according to how far it has developed. Two out of the three components of an anchor, as adapted from Schein's original proposals, were seen (Chapter 11 section 10) to develop at different rates during the career. The skill and ability related values were most likely to have developed first, presumably during the graduates' experience of the higher educational system. Examples were a wish to do scientific work, as opposed to non-scientific. Lifestyle related values, e.g. locational constraints, such as not wishing to move anywhere in the country for work, developed more gradually over the first ten years after graduation. The more broadly job related values, such as a desire for variety, did not show any particular pattern of development, with the exception of the possibility that the most general values, such as interesting versus boring work, may decompose over time into more specific ones, such as wanting control over decisions and autonomy at work.

It is suggested that most of the graduates managed their changes from a starting position of holding very general occupational objectives, such as some combination of congenial well paid work with status and prospects. Together with these they held opinions of their skills and abilities, derived from their education, e.g. they thought they were suitable for abstract work as opposed to practical work. As they acquired work experience, they also acquired new values, discarded some of their old ones and refined the others, and an anchor gradually emerged, with, or more often without, being deliberately sought. When it came to the contemplation of a job change, they began to realise which values they were least inclined to disregard. They were in a sense free to do this because, for people with their qualifications, there were usually several agreeable alternative jobs available at the time.

The evidence implies that graduates managed their changes effectively, as even those who had moved several times reported high levels of job satisfaction eventually. Admittedly, there was no attempt to directly assess how traumatic changes had been for people at the actual time they

happened, since neither sample was chosen with this aim. Recollections and reconstructions of change were the phenomena of interest. It can however be argued that if the changes had been highly emotionally charged this should have emerged from the in depth interviews of Sample One, where respondents were given every opportunity to talk about their experiences.

12.6 How far could their views and experiences of flexibility be explained by existing psychological theories about careers?

At the end of Chapter 3, it was argued that existing theories of occupational choice were not effective at explaining the results of the empirical studies of occupational change. After the three stages of the project, the results were not so critical of all existing theories, although some of the modifications to the typology made after Stage 2 showed up some gaps. It must be remembered that this research did not focus on the original choice of occupation as such, nevertheless, the Stage 2 results showed that the experiences of the graduates did not contradict Super's developmental theory of occupational choice, which states that progress through the occupational career is a developmental process.

Super's theory predicts that people choose their occupational careers by 'implementing the occupational self concept', which is paradoxically described as 'generally fairly stable from late adolescence to late maturity'. The occupational self concept is said to be implemented by means of a complex process of role playing and compromise, which takes place through various distinct stages. The stages are age related, and those that should have appeared in Sample One were (1) Exploration and (2) the Trial and Stabilisation substage of Establishment. Behaviours postulated as typical of these were found in this project, but there was absolutely no evidence for any boundary between the two stages. Gradual evolution throughout the career was the preferred term.

There was little evidence relating to differentialist pattern matching theories of occupational choice (e.g. Holland) at Stage 2, mainly because no standard inventories were used. At Stage 3, the hypothesis that Valued Attributes (career related values) would remain as a fixed influence in

flexible changes because they corresponded to fixed traits was not supported (see Chapter 11, section 9). Most graduates changed their career related values between the time of graduation, when they were unlikely to have been anchored, and their latest career decisions, when they had found their anchors.

The primary strength of the structuralist approach lies in explaining the restrictions on career behaviour imposed by the labour market on people from working class backgrounds who have low educational achievements, so it was not expected that these theories would be particularly appropriate to the privileged world of the graduate, especially at a time when graduate unemployment was very low. However, there was more implicit support for structuralist approaches than might be expected, to the extent that graduates had often felt that they were drifting with a herd in their earlier educational and work experiences, as though constrained within a system of limited opportunities.

The views of Hall and Parsons and Hutt on the need for challenge during occupational socialisation were strongly supported. People who were bored and/or frustrated inevitably changed, although it took some far longer than others to do so. Rewarding experiences during occupational socialisation (e.g. success at work that is acknowledged by the organization) were important in discovering an anchor, and could be incorporated into the model as a necessary condition for the discovery of an anchor.

How might a graduate have implemented such a nebulous construct as their occupational self concept? According to the Oxford English Dictionary, to implement means to complete, or to fulfil, or to put into effect, or to fill up, or to supplement. The model of an anchor proposes that occupational self concept is too strong a term for the general occupational aims held by the majority of the graduates studied. It would be more evocative of their accounts to say that they were gradually building an anchor. This anchor, or set of core values, might well constitute a specific area of their eventual occupational self concept. The building, or completing, took place by the interaction between the original, rather unclear, picture formed by the graduates as they drifted

into the world of work, and the powerful influences of occupational socialisation and work experience. The development and influence of lifestyle values also became an integral part of the anchor for most people (and, indeed, an overriding influence for a minority).

The argument is not intended to denigrate existing theories to the extent that is sometimes indulged in by an academic thesis; the aim is to demonstrate that existing theory can be supplemented in a specific area and in a constructive way, through using a slightly different, but complementary, perspective.

Finally, what use is it to posit an anchor rather than an occupational self concept? What difference does it really make? The following answers are suggested:

1. An anchor is a more specific, and therefore more practical, term to introduce. It does not need to be diagnosed via a detailed inventory of tasks performed and values held. It can be derived from a study of specific decisions that actually occurred.

2. An anchor only comes into play when necessary, so it may not be as central to a person's whole identity as the occupational self concept, which is such an all embracing entity that it can be difficult to separate out for consideration.

3. An anchor, and more particularly a set of Core Values, is by definition more flexible than the occupational self concept. It may be that not all graduates have anchors by the time they are thirty-five; certainly in the population from which Sample Two were selected there were a few people whose self descriptions of their career paths suggested that they were not anchored in any way (see Chapter 11, section 6.1).

4. The idea of an anchor allows us to reflect directly on the current occupational situation, and look forward to the future. When faced with a distinct choice, it should become evident which are a person's Core Values.

12.7 What implications might the findings of this project have for the careers counselling of adults?

Overall it is argued that no counsellor can offer occupational changers much useful advice unless she or he can understand their client's own perspectives on their experiences. The most obvious implication for counselling is that flexibility is not unusual. It need not be seen as unfamiliar or threatening. Secondly, the change typology developed may be useful for people when reflecting on their career progress. It could provide a framework for them to compare themselves with the experiences of others which could lead to more insight, especially if supplemented by group discussions and counselling sessions where necessary. Interactive computer programmes might help people to discover their anchors, in terms of their original preanchored Core Values and exactly how these have become anchored Core Values, e.g. what pattern of change was used.

Highly educated people, even if made redundant, can be reassured that they can adapt to different types of job. They may need help to work through a sense of guilt at having made 'bad' career decisions in the past: for example, when comparing themselves with those who have remained in employment. A little more emphasis on the place of circumstances in enabling people to discover their career anchors may be helpful here. This emphasis need not in any way devalue the need for the person to accept their own autonomy in making their career for themselves as far as possible, but it may be useful in combatting problems of self esteem, a natural reaction to setbacks such as redundancy or failure to be promoted at the expected time.

People can also be advised of the wisdom of integrating home and work life. For example, this integration might be seen as lacking by the counsellor. Alternatively, changes proposed by the client may seem likely to cause conflict in this area in the future.

Counsellors should be aware of the implications of the finding that there are many different ways a person can discover their career anchor. Long term planning strategies may not suit everyone, and should not be emphasized to the exclusion of other strategies, such as cultivating an

awareness of current opportunities as they arise. Counsellors often favour training clients specifically in decision making skills, but this may not be a fully effective approach for graduates, unless they have patently had problems in this area.

Counsellors may also be interested in the possibilities of integrating the career anchors model of career development with more general theories of lifespan development, i.e. those encompassing biological, psychological, social and occupational events. Levinson's theory (Levinson et al., 1978) seems a particularly appropriate example. Levinson believes that:

> The life structure evolves through a relatively orderly sequence during the adult years...it consists of a series of alternating stable (structure building) periods and transitional (structure changing) periods.

By a period he means " a relatively stable segment of the total life cycle". Several periods form an era. Levinson's Early Adulthood Era lasts from the age of about 17 until the person reaches approximately 40. The periods within this era, with their typical ages, are the Early Adult Transition (17-22), Entering the Adult World (22-28), the Age 30 Transition (28-33) and Settling Down (33-40). The average age of the graduates interviewed at Stage 2 was 34, while at Stage 3 most were 34 to 36, with an average of 35. Therefore they were all likely to have been at least starting their Settling Down, a stable period after the Age 30 Transition. At this time they would be expected, according to Levinson, to "settle for a few key choices", "pursue long range plans and goals", and "get serious". It is possible that discovering a career anchor is a typical part of the Age 30 Transition for a graduate. Being more aware of their anchor may help in the Settling Down process.

Although Levinson's theory was derived from a study of American men, it may be found to have wider applicability, at least for men, and it does seem to be compatible with the career anchors model.

12.6 Overview

Overall, the conclusion is that flexibility in graduate career development is an important area worth researching. There is a gap in current knowledge between surveys of occupational mobility which offer little or no explanation of self chosen flexibility, and case studies that concentrate on its occurrence in particular professional groups, such as managers. This research has begun to bridge that gap. It has demonstrated that flexible change in the occupational careers of graduates takes a wide variety of forms and is not problematic to its participants. It has further suggested that the area of flexibility, despite its relevance to current employment problems, has been underresearched because the associated theories of occupational choice have underrated both its prevalence and its importance. Despite attempted revisions, such as Ginzberg (1972) and Super (1976), theories of occupational choice have not adapted as well as they might because of their underlying assumption that the one-life one-career imperative somehow represents both the status quo and a desirable state of affairs. The present thesis argues that it does neither. A combination of lifespan developmental theory and ideas from work on managerial careers (Schein's anchor, Levinson's periods of the life cycle and Hall's occupational socialisation needs) can provide both more promising descriptions and potential explanations of how careers seem to the graduates themselves.

It is therefore concluded that the combination and adaptation of approaches to career development known as the anchor model can provide a plausible explanation for the views and experiences of flexible change in the two samples of graduates studied, and that it is worthy of further investigation on larger and more representative samples of graduates and other professionals. The opinions of practising careers counsellors who have worked with adults would be of great value in any further research. The anchor model conveys the idea that there is always some flexibility; flexibility is normal: an anchor may be an essential ingredient of change, something that arises out of change and is an essential part of a period of change. It is a less rigid but more specific construct than the occupational self concept, and has potential as a basis for empirical research.

TABLE: Appendix 1 : The Occupational Decision Making Index, Labuda (1974)

WORK VALUES (21 ITEMS)

Work Values	Importance at the Time of Decision Making: Most (pick 2-4)	More	Some	Little	None (----No Limit-----)
1. A secure job. No worry about being laid off	1.___	___	___	___	___
2. Good chance for advancement	2.___	___	___	___	___
3. Salary and fringe benefits adequate for my needs	3.___	___	___	___	___
4. Doing physical labor. Working with my hands.	4.___	___	___	___	___
5. Relating to people. Developing interrelationships. Being sociable.	5.___	___	___	___	___
6. A job that commands respect. Others look up to me.	6.___	___	___	___	___
7. Being intellectually stimulated. Solving abstract problems.	7.___	___	___	___	___
8. Good working conditions. Healthy environment. Not a lot of stress.	8.___	___	___	___	___
9. Being my own man. Having a lot of independence on the job.	9.___	___	___	___	___
10. Good relationship with my fellow workers	10.__	___	___	___	___
11. A job that is well structured. Everything to do is clearly defined.	11.__	___	___	___	___
12. Benefitting others. Improving living conditions. Correcting injustice.	12.__	___	___	___	___
13. Having a lot of responsibility. Others depend on my job performance.	13.__	___	___	___	___
14. A job that offers a lot of variety.	14.__	___	___	___	___
15. A supervisor who respects and supports me.	15.__	___	___	___	___
16. Being artistic. Expressing myself through an art medium. Creating beauty.	16.__	___	___	___	___
17. A job that gives me a sense of achievement and accomplishment.	17.__	___	___	___	___
18. Having authority. Making decisions. Managing some operation.	18.__	___	___	___	___

19.	A job that offers adventure	19.__	___	___	___	___
20.	A chance to be inventive or creative. Involving myself in research.	20.__	___	___	___	___
21.	List and rank any other work value that influenced your decision.	21.__	___	___	___	___

CIRCUMSTANTIAL FACTORS (20 ITEMS)

Persons and Circumstances Influencing Decision Making	Influence at the Time of Decision Making				
	Most	More	Some	Little	None
	(Pick 2-4)	(----No Limit----			
1. Job entry is quick and easy. No special qualifications required.	1.___	___	___	___	___
2. Job interest is largely the result of the example and opinions of friends.	2.___	___	___	___	___
3. A crisis exists. I need a job now.	3.___	___	___	___	___
4. Ethnic background/race has limited my opportunities.	4.___	___	___	___	___
5. My parents (guardian) want me to pursue a particular occupation.	5.___	___	___	___	___
6. The economy of the country/local area is bad. Job opportunities are limited.	6.___	___	___	___	___
7. Changes in technology have eliminated my job. A machine has taken my place.	7.___	___	___	___	___
8. Technology has created new jobs. New job opportunities now exist.	8.___	___	___	___	___
9. My wife (girl friend) wants me to get another job.	9.___	___	___	___	___
10. I know the jobs I don't want. My choice is a job with the least negative factors.	10.__	___	___	___	___
11. Getting a break. Being in the right place at the right time. Having a contact.	11.__	___	___	___	___
12. The place where I live offers limited job variety and opportunities.	12.__	___	___	___	___
13. There is a demand for more applicants for the job. Finding work looks good.	13.__	___	___	___	___
14. The job I want has an over supply of candidates. There is little chance of getting work.	14.__	___	___	___	___
15. There was no knowledgeable person to give me guidance so I drifted into a job.	15.__	___	___	___	___
16. My parents cannot afford to send me to college or get special training in some skill.	16.__	___	___	___	___
17. I know the job I would like, but I cannot move to the place where it is available.	17.__	___	___	___	___

18. My marital status has recently changed. I feel free to try another occupation 18.__ ___ ___ ___ ___

19. My age is a factor (too young or too old). Job opportunities are limited. 19.__ ___ ___ ___ ___

20. List and rank any other circumstance(s) that influenced your decision. 20.__ ___ ___ ___ ___

PERSONAL RESOURCES (9 ITEMS)

Note: Before responding, the subject was cautioned by the interviewer to think of personal resources as assets (highly developed) or liabilities (deficient development) since either aspect can have great influence on decision making and to record them accordingly. Provision was made for the respondent to rate the level of development (adequate or inadequate) of each item. For this operation, the respondent was instructed to use a distinguishable mark (o) so that his evaluation of development of each resource would be easily discernible from its influence on decision making.

Self Evaluation of Personal Assets or Liabilities Influencing Decision Making	Influence at the Time of Decision Making (Mark with (X))				
	Most	More	Some	Little	None
	(pick 1-3)	(------No Limit------)			
1. Occupational information. The extent and depth of my knowledge about the job market Qualifications, working conditions, benefits opportunities of a variety of jobs. How much did my knowledge or lack of it influence my decision making?	1.___	___	___	___	___
2. Education/specialized training background The level of formal education and training and how much it influenced my decision making.	2.___	___	___	___	___
3. Work experience. The variety and depth of on the job experience. Familiarity with the work environment. Development of skills. How much did work experience or lack of it influence my decision making?	3.___	___	___	___	___
4. Economic freedom. Having the finances necessary to do what I want. The resources to afford an expensive training or education program. How much influence did economic freedom or lack of it have on my decision?	4.___	___	___	___	___
5. Competence image. Image of myself as a highly competent and dependable person. Comfortable at competition. Others respect me. How much did my feelings of competence or lack of it influence my decision making?	5.___	___	___	___	___

6. Learning skill. Ability to learn new information quickly and understand difficult problems. How much did my belief in my learning skill or lack of it influence my decision making? 6.___ ___ ___ ___ ___

7. Decision making skill. Ability to weigh differing factors and arrive at a judgement. The ability to look ahead and plan. How much did my belief in my ability to make decisions or the lack of it influence my decision making? 7.___ ___ ___ ___ ___

8. Health/energy level. The stage of my general physical health and vitality and how much it influenced my decision. 8.___ ___ ___ ___ ___

9. List and rank any other personal resource(s) or lack of it which influenced your decision? 9.___ ___ ___ ___ ___

THE FIRST TEN YEARS IN THE WORKING LIVES OF BRITISH GRADUATES.

All the information you give on this form will be kept Strictly Confidential.

Please write or print your answers clearly, in ink, or type them. You will probably find the form easier to complete if you read it all the way through first.

Please post the completed form back to us as soon as possible, using the reply paid envelope.

NAME: _____

ADDRESS: _____

_____

_____

_____

Telephone number: _____

Main subject of first degree: _____

Main subject of higher degree, if any: _____

TEXT BOUND INTO THE SPINE

st, we need to know some basic facts about what jobs you have done since you graduated. ase fill in the following Work History Chart, which will help to pinpoint the occupational nge or changes that you have made. (N.B. Full time training, being a housewife, bringing children or anything else of that nature should all be listed as occupations.)

rt with your first substantial job (one where you stayed at least six months) that you k after graduation. That means don't count casual, fill-in, vacation or temporary jobs. you continued studying for another degree immediately after graduating, call this your st substantial job.

There is an EXAMPLE of a completed chart on the next page.

Year of Entry	Full or Part-time	Job title & nature of occupation.

y additional information on work history that won't fit on the chart:-

You have been chosen for this Project because you have made at least one change in your occupation. By OCCUPATION CHANGE we mean doing a different job in a different field. We do not mean a promotion or a change of employer within an occupation.
For example: a researcher in industry becoming a lecturer, or a laboratory scientist becoming a marketing manager, or a technologist becoming an accountant, or an engineer becoming a manager.
You need not necessarily have changed employer. In some cases, retraining may have been involved.

NOW PLEASE DRAW A THICK LINE ACROSS THE WHOLE CHART TO IDENTIFY THE OCCUPATIONAL CHANGE POINT. This should be when you actually finished your last job before changing direction, whether or not you went into another very different one straight away, or entered retraining, or had a gap in employment.

IF THERE ARE SEVERAL SUCH CHANGE POINTS, please number them. In this case you will need to answer the rest of the questions separately for each one.

EXAMPLE CHART:-

Occupational Change Point numbers	Year of Entry	Full or Part-time	Job title & nature of occupation.
	1970	Full	RESEARCH CHEMIST IN INDUSTRY, ABC CoLD.
	1972	..	.. .. , SMITHS CHEMICALS.
(1)			
	1974	..	LECTURER IN INDUSTRIAL CHEMISTRY, BLANKSHIRE POLYTECHNIC
(2)			
	1976	..	MANAGEMENT DIPLOMA
	1977	..	MANAGER, XYZ CHEMICALS.

Next, because we are interested in investigating the choices people make during their working lives, we would like to know more about the major reasons behind your Occupational Changes. We appreciate that it is often difficult to pin down exactly why you did something, especially when it happened some time ago. However, from studying previous research and some preliminary discussions and interviews, we think it may be possible to group people who make Occupational Changes into four categories. This would be done by taking their major reasons for making each change. Now we need your help to see whether these categories make sense, and whether they can in fact cover all the situations you have experienced.

The four categories are on the next page. Please read through them carefully.

Category A :- I had to leave that job, for reasons essentially outside my control, such as one or more of the following:-

(i) Fixed term contract ended.
(ii) Redundancy.
(iii) Age limits for that job reached.
(iv) Accident or illness prevented me from continuing.
(v) The job was moved to another part of the country where I could not move, or did not wish to do so.
(vi) I had to give up work because of pregnancy, or to look after sick relatives.
(viii) My family circumstances had changed considerably, so that I could not manage on the income from the job.

Category B :- I left that job because, although I was reasonably well suited, I saw an opportunity that was too good to miss in another occupation.

Category C :- I left that job because it had never really been what I wanted; I was mismatched with it.

Category D :- I left that job because I had gradually become less suited to it.

NOW, keeping these categories in mind, look back through your Work History Chart. For each Occupational Change Point you have identified please place a tick in the Category Box which most closely describes your major reason for changing your job. Only in really exceptional circumstances, if you really cannot fit your reasons into one of the Category Boxes, then write a note in the space provided.

OCCUPATIONAL CHANGE POINT NUMBER	CATEGORY BOXES A	B	C	D	Other : Please specify-
1 The major reason was	☐	☐	☐	☐	
2 The major reason was	☐	☐	☐	☐	
3 The major reason was	☐	☐	☐	☐	
4 The major reason was	☐	☐	☐	☐	
5 The major reason was	☐	☐	☐	☐	

DATE of BIRTH:_____

MARITAL STATUS: Single

Married or equivalent

Separated, divorced, widowed etc.

SEX:_____

DATES of BIRTH of your CHILDREN, IF ANY: First child_____

Second child_____

Third child_____

What was the main occupation of your father when you entered University or Polytechnic? (or his last full-time occupation if he was unemployed, retired or deceased at that time)

_____

THANK YOU VERY MUCH FOR YOUR COOPERATION. We will keep you informed of the progress of this Project.

DEPARTMENT OF EMPLOYMENT

UNIT FOR MANPOWER STUDIES

Almack House 26-28 King Street London SW1Y 6RB

Telephone Direct Line 01-214 8779

Switchboard 01-214 6000

Your reference

Our reference 10/RP 105/80

Date February 1980

Dear Graduate

Just over two years ago you kindly completed and returned my questionnaire on the National Survey of 1970 graduates. We have now started to publish some results (a first article "Moving around in the room at the top" appeared in the December 1979 issue of Employment Gazette) and there is increasing interest in the mobility of graduates. We have now been asked by the Open University to help them in a research project but because we promised to treat your earlier replies as confidential we have not released any information, not even your name and address.

I am writing now to ask whether you would cooperate with this Open University project, details of which are given in the enclosed letter from Jenny Lewis. Your further help would supplement our more general survey and will be greatly appreciated. If you would like to have the December 1979 Gazette article please let me know and I will send you a copy.

Thank you for your help.

Yours sincerely

Peter Williamson.

Peter Williamson

1969 10 1979

THE OPEN UNIVERSITY

The Open University,
Walton Hall,
Milton Keynes,
MK7 6AA.
Telephone: Milton Keynes 74066

Psychology Unit
FACULTY OF SOCIAL SCIENCES
February, 1980.

Dear Graduate,

First of all I'd like to apologise for approaching you like this out of the blue, and hope you'll find the time and patience to read on and see why this was necessary.

I'm writing to ask for your help with a Project on the First Ten Years in the Working Lives of British Graduates. Although there have been some investigations of how people choose their first jobs, the various changes they make over the next few years have not been researched. This is the area that I plan to study. The results are intended to be of practical use to future graduates, and to others who may be contemplating changes in their working lives. Many occupations are changing so rapidly in our modern technological society that we increasingly need to be flexible in our work choices.

One of the biggest problems in any follow-up of graduates is obtaining the addresses of a statistically suitable sample. Careers services do not keep last known addresses for longer than five or seven years. Graduate convocations do, but they are pledged to total confidentiality. The only way to make contact with people who graduated ten years ago is therefore to get them from a previous survey. This is why I'm extremely lucky to have the help of the Unit for Manpower Studies, and also why I'm extremely dependent on your co-operation. Your help is particularly vital because you are one of a very small sample. You have been chosen because you seem to be one of those people who has made an occupational change. When you replied to the National Survey of Graduates, run by Peter Williamson of the Unit for Manpower Studies in 1977, your answers included the following: your first degree main subject was science, technology or engineering, the first substantial job you listed was in a field appropriate to such a degree, and the last listed job was in a different field.

Because of the stringent confidentiality constraints that Peter Williamson has already mentioned, I am unable to identify you as an individual, and this means that some of the questions will be the same as those you answered three years ago. I'm sorry about the repetition but there is no way to avoid it and maintain confidentiality.

What I would like you to do is to complete the enclosed form. I have tried to make it as interesting as possible, and to leave you scope to contribute your own ideas to the research, rather than just ticking Yes/No answers.

If the form is too time-consuming but you are still interested in this study, a pink slip is enclosed on which you can write your telephone number(s) and the times at which it would suit you best to be contacted, and then send it to me in the prepaid envelope.

Useful and interesting social psychological research depends on finding out what people think about important issues and events in their lives. Please try to help. You will of course be welcome to the eventual results of this study.

Yours sincerely,

(Ms.J.M.Lewis.)

Appendix 3 : INTERVIEW PLAN for Stage Two

Could you give me some idea, briefly, what your present job involves?

In general, what would you say are the best things about it? and the worst?

Before that you were a -------- Could you tell me a bit more about that?

Best? Worst?
Had you finished that job before you applied to be a --------?

Can you remember if you applied for any other jobs at that time? What sort of jobs were they. Did you get any interviews? Did you ever turn down a job afte: an interview?
If so, why?

Think about the day of the interview....
When you first accepted the job as a _____, can you remember how you thought it would be? and how differently did it turn out?

Specific probes

What put you off?
Would you have been prepared to move to another part of the country?
In what way was it a great opportunity?
What exactly did it offer that X didn't?
How did your wife react to that?
So why did you take that, if you felt like that about it?
Redundancy - how did the firm approach you about that? and how did you feel?
What about -------- (e.g. status) Would you have been content as a --------?
How much responsibility did that involve?
How were the working conditions so different?
You mentioned company policy/industrial relations - how did that come in?
What were the other people like?
Did it bother you that --------?
Could you explain that a bit more?
How important was the salary - nowadays everyone must consider it?
Did the firm have any training schemes for graduates?

Further back

Did you have any very definite ideas then about what sort of job you wanted?
How much have these changed now?
Your degree was in -------- (e.g. Chemistry) Did you think of yourself then as a (chemist) or as some kind of specialist, or what?

Gaps to be probed, possibly

What the actual job consisted of that was liked/disliked.
What the conditions of work, hours etc contributed.
What the other people/clients/colleagues/subordinates/supervisors were like?
How much contact with them there was and whether this was liked/disliked.

Planning question:

Looking back on all this, how far ahead do you think you've planned what you've done.

At the end

Is there anything we haven't discussed that you see as relevant?

APPENDIX 4 : FURTHER DETAILS OF STATISTICS ON HYPOTHESES 4 & 5.

The relationship between Total Attribute Difference and the independent variables involved in career decisions (see Chapter 11, section 11) was further investigated by a multiple regression analysis. To check that this procedure was appropriate, the measures of association, zero order correlation coefficients and partial correlation coefficients between these independent variables were inspected (see TABLE A1). None of these were highly correlated with each other and none of the first or second order partial correlations between the variables involved large changes in the values of the correlation coefficients, suggesting that interactions between them were neither concealing or inflating any strong effects on Total Attribute Difference. Therefore, using all these variables, a stepwise multiple regression was performed with Total Attribute Difference as the dependent variable. All nine independent variables were entered into the equation. The variable Speciality was represented by two dummy variables, having taken an engineering/science degree or not, and having taken a vocational degree or not. The total variance explained by this procedure was 18% (SEE TABLE A2). Inspection of the residuals suggested that departures from linearity were greatest at either ends of the distribution of Total Attribute Difference. Accordingly, the regression equation was recalculated using only three values of the dependent variable: positive, nil or negative. The results are shown in TABLE A3. This improved the percentage of variance explained (R squared) slightly to 20%. However, for both equations the more conservative measure of variance explained, the adjusted R squared, was negligible. This may have been partially due to the large number of independent variables and small number of cases involved. all the independent variables considered have some effect on Total Attribute Difference. However, much of the variance on this variable remains unexplained. There must be a doubt as to its usefulness in describing career development or flexibility.

The same set of independent variables as were used to investigate Total Attribute Difference were then regressed against Score Difference. None of them correlated significantly with this dependent variable (see TABLE A4). It can be seen from TABLE A5 that the variables Time and Number of

Decisions were virtually unrelated to Score Difference, as would have been expected, given their low simple correlation coefficients. The total variance explained by this regression was only 17% (adjusted R squared was negligible). However, when Score Difference was collapsed into three categories to reduce the effects of the cases with extreme scores (see TABLE A6), the variance explained rose to 31%. Adjusted R squared was 19%.

This suggested that the seven variables which entered the regression equation do show a simple additive linear relationship with Score Difference. The first three variables produced the greatest change in R squared, so these can be said to have the most influence.

TABLE A1: CORRELATION COEFFICIENTS BETWEEN

INDEPENDENT VARIABLES INVOLVED IN CAREER DECISIONS.

Key:

• Spearman correlation coefficient (all others are Pearson coefficients).

* Significant at the 0.05 confidence level

	Sex	Age	Time	No. of decisions	Class			
Style	-0.25	0.07	0.12	-0.07	•0.03	Style		
S.E.G.	0.22	0.11	0.13	-0.08	n/a	-0.09	SEG.	
Stability	-0.27	0.08	0.07	-0.09	•0.27	0.25	-0.18	Stability
Speciality	•0.33*	•-0.01	•-0.22	•-0.08	•0.02	•0.15	•0.00	•0.11

	Sex		
Age	-0.21	Age	
Time	0.06	0.00	Time
Number of decision	0.06	0.27*	0.32*

	Vocational	Engineering/ Science	Arts/Social Science
Sex	-0.09	-0.30*	0.41*
Age	-0.05	0.19	-0.15
Time	0.04	0.20	-0.26
Number of decisions	0.11	-0.02	-0.08
Class	•-0.13	•0.17	•-0.07
Style	-0.10	-0.05	0.15
SEG	0.06	-0.10	0.05
Stability	-0.20	0.16	0.01

TABLE A2 : RESULTS OF MULTIPLE REGRESSION ON TOTAL ATTRIBUTE DIFFERENCE WITH STEPWISE INCLUSION OF INDEPENDENT VARIABLES.

Independent Variable	Multiple R	R Squared	Beta weight
Time	0.26	0.07	-0.19
Career Path	0.33	0.12	-0.15
Age	0.37	0.14	0.23
Engineering/Science degree	0.39	0.15	-0.05
Style	0.40	0.16	-0.05
Sex	0.41	0.17	0.15
Vocational degree	0.42	0.17	0.13
S.E.G.	0.42	0.18	-0.09
Number of decisions	0.42	0.18	-0.04

Overall R Squared: 0.18
Adjusted R Squared: -0.02

TABLE A3 : RESULTS OF THE SAME REGRESSION PROCEDURE WITH TOTAL ATTRIBUTE DIFFERENCE DIVIDED INTO THREE DISCRETE CATEGORIES.

Independent Variable	Multiple R	R Squared	Beta weight
Career Path	0.32	0.10	-0.25
Time	0.35	0.12	-0.08
Vocational Degree	0.37	0.14	0.18
Sex	0.39	0.15	0.22
Age	0.42	0.18	0.21
S.E.G.	0.44	0.19	-0.16
Number of decisions	0.45	0.20	-0.10
Style	0.45	0.20	-0.03

Overall R Squared: 0.20
Adjusted R Squared: 0.03

N.B. The variable for engineering/science degree did not enter the equation.

TABLE A4 :

CORRELATION COEFFICIENTS FOR SCORE DIFFERENCE AND OTHER VARIABLES

Independent Variable	
Sex	-0.07
Age	-0.12
Time	-0.05
Number of decisions	-0.03
Style	0.16
Class	•0.12
S.E.G.	-0.09
Stability	0.08
Speciality	•0.17
Vocational degree	0.03
Engineering/science	-0.02
Arts/Social Science	-0.01

• Spearman Correlation coefficient (others are Pearson coefficients)

TABLE A5 ; RESULTS OF MULTIPLE REGRESSION ON SCORE DIFFERENCE WITH STEPWISE INCLUSION OF INDEPENDENT VARIABLES.

Independent Variable	Multiple R	R Squared	Beta weight
Style	0.23	0.05	0.35
Age	0.29	0.08	-0.16
Sex	0.32	0.10	0.32
Vocational Degree	0.34	0.12	0.32
Engineering/Science degree	0.40	0.16	0.29
Stability	0.41	0.17	0.07
S.E.G.	0.41	0.17	-0.06

Overall R Squared: 0.17
Adjusted R Squared: 0.02

N.B. The variables, Number of Decisions and Time did not enter into the equation.

TABLE A6 : RESULTS OF THE SAME REGRESSION PROCEDURE WITH SCORE DIFFERENCE DIVIDED INTO THREE DISCRETE CATEGORIES.

Independent Variable	Multiple R	R Squared	Beta weight
Sex	0.31	0.10	0.37
Style	0.42	0.18	0.36
Age	0.48	0.23	-0.20
S.E.G.	0.51	0.26	-0.19
Stability	0.55	0.29	-0.22
Engineering/Science degree	0.55	0.31	0.15
Number of decisions	0.56	0.31	-0.04

Overall R Squared: 0.31
Adjusted R Squared: 0.19

N.B. The variables Time and Vocational Degree did not enter into the equation.

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